(18,360.)

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1902.

No. 215.

THE SINGER MANUFACTURING COMPANY, PETITIONER,

vs.

HERMAN CRAMER.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE NINTH CIRCUIT.

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a *Transcript of Record.*

In the United States Circuit Court of Appeals for the Ninth Circuit.

THE SINGER MANUFACTURING COMPANY, Plaintiff in Error,
vs.
HERMAN CRAMER, Defendant in Error. } No. 638.

In error to the United States circuit court of the ninth judicial circuit, northern district of California.

1 *Declaration.*

In the Circuit Court of the United States for the Northern District of California, of the July Term of said Court, of the Year One Thousand Eight Hundred and Ninety-six.

UNITED STATES OF AMERICA, }
Northern District of California, } ss:

Herman Cramer, of the town of Sonora in the county of Tuolumne, State of California, and a citizen of the said State of California, plaintiff in this action, by John H. Miller his attorney, complains of the Singer Manufacturing Company, a corporation organized and existing under and by virtue of the laws of the State of New Jersey, of a plea of trespass on the case.

For that at all times hereinafter mentioned, the Singer Manufacturing Company aforesaid was and is now a corporation organized and existing under and by virtue of the laws of the State of New Jersey, but doing business and having a managing and business agent at the city and county of San Francisco in the State of California.

And for that heretofore on and prior to the 25th day of May, A. D. 1882, plaintiff was the original and first inventor of a certain new and useful invention, to wit, an improvement in treadles for sewing machines, more fully and at large described in the letters patent issued therefor by the Government of the United States as hereinafter alleged, as will more fully appear from the said letters patent to which special reference is hereby made.

2 And for that the said invention was a new and useful one and was not known or used by others in this country, nor patented, nor described in any printed publication in this or any foreign country prior to the invention thereof by the plaintiff, and at the time of his application for letters patent therefor as hereinafter alleged, the same had not been in public use or on sale in the United States for two years, nor abandoned, nor has the same ever been abandoned.

And for that the said plaintiff, being as aforesaid, the inventor thereof, did, on the 25th day of May, A. D. 1882, make application to the Government of the United States for the issuance to him of

letters patent for said invention, and thereafter, to wit, on the 30th day of January A. D. 1883, after proceedings duly and regularly had and taken in the matter of said application, letters patent of the United States were granted, issued, and delivered to the said plaintiff for the said invention, granting and securing to him, his heirs and assigns, for the full term of seventeen years from said last-mentioned day, the sole and exclusive right to make, use, and vend the said invention throughout the United States of America and the territories thereof.

And for that said letters patent were issued in due form of law under the seal of the Patent Office *of the Patent Office* of the United States, signed by the Secretary of the Interior and countersigned by the Commissioner of Patents of the United States and bear date the day and year last aforesaid, to wit: the 30th day of January, A. D. 1883, and are numbered 271,426, all of which will more fully
3 appear by the said letters patent, which are ready in court to be produced by the plaintiff, or a duly authenticated copy thereof, and of which he hereby makes profert.

And for that prior to the issuance of said letters patent all proceedings were had and taken which were required by law to be had and taken prior to the issuance of letters patent for new and useful inventions.

And for that ever since the issuance of said letters patent the plaintiff had been continuously, and is now, the sole and exclusive owner and holder of said letters patent and of all the rights, liberties, and privileges by them granted and conferred throughout the entire United States of America and the territories thereof.

And for that since the issuance of said letters patent, in the exercise of the rights and liberties by them granted, the plaintiff has made, used, and sold the device so patented and has practiced the said invention, and has had and maintained, until the infringement hereinafter complained of, possession of the said invention under and by virtue of the said letters patent, and has never acquiesced in any invasion or infringement of his said rights.

Yet notwithstanding the premises, the defendant herein, having full knowledge thereof, and in violation of the exclusive rights and privileges secured to the plaintiff by said letters patent, and utterly disregarding the same, and contriving and intending to injure and damage the plaintiff, from and since the day of the issuance of said letters patent, to wit: the 30th day of January,
4 A. D. 1883, and continuously, without the cessation of a single day, and uninterruptedly from said day up to the time of the commencement of this action, without the license or consent of plaintiff, but contrary thereto, in the State of California and the northern district thereof, and in various and sundry other States and Territories of the United States of America, has wrongfully and unlawfully made, used, and sold large numbers of sewing machines containing and embracing the invention described, claimed, and patented in and by said letters patent.

That said machines so made, used, and sold by the defendant were and are an infringement upon the said letters patent No.

271,426 and were made according to the specification thereof, contrary to law and the form, force, and effect of the statutes of the United States in that behalf made and provided.

Whereby and by reason of the premises and the infringement aforesaid, the plaintiff has been greatly injured and damaged and deprived of large royalties, license fees, gains, and profits which he would have derived from the practice of said invention, and has sustained actual damages thereby in a large sum, to wit, two hundred and fifty thousand ($250,000) dollars.

Wherefore, by force of the statute of the United States a right of action has accrued to plaintiff to recover the said actual damages and such additional amount not exceeding in the aggregate three times the amount of such actual damages, as the court may see fit to adjudge, besides costs of suit.

5 Yet the defendant, though often requested, has never paid the same or any part thereof, but has refused and still does refuse so to do, and therefore plaintiff brings this action.

JOHN H. MILLER,
Attorney for Plaintiff.

NOWLIN & FASSETT,
Of Counsel for Plaintiff.

UNITED STATES OF AMERICA,
Northern District of California,
City and County of San Francisco, } ss:

Herman Cramer, being duly sworn, deposes and says that he is the plaintiff in the within-entitled action; that he has read the above and foregoing declaration and knows the contents thereof; that the same is true of his own knowledge, except as to the matters which are therein stated on his information or belief, and as to those matters, that he believes it to be true.

HERMAN CRAMER.

Subscribed and sworn to before me this 8th day of October, 1896.

[NOTARIAL SEAL.] F. C. MOSEBACH,
Notary Public in and for the City and County of San Francisco, State of California.

(Endorsed:) Filed October 8, 1896. W. J. Costigan, clerk. By W. B. Beaizley, deputy clerk.

6 UNITED STATES OF AMERICA:

Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
SINGER MANUFACTURING COMPANY, Defendant.

Action brought in the said circuit court, and the complaint filed in the office of the clerk of said circuit court, in the city and county of San Francisco.

Summons.

The President of the United States of America to Singer Manufacturing Company, defendant, Greeting:

You are hereby required to appear in an action brought against you by the above-named plaintiff, in the circuit court of the United States, ninth circuit, in and for the northern district of California, and to file your plea, answer, or demurrer, to the complaint filed therein (a certified copy of which accompanies this summons), in the office of the clerk of the said court, in the city and county
7 of San Francisco, within ten days after the service on you of this summons—if served in this county, or if served out of this county, then within thirty days—or judgment by default will be taken against you.

The said action is brought to recover $250,000 damages alleged to have been sustained by plaintiff from the infringement by you upon letters patent of the United States No. 271,426 dated January 30, 1883, for an improvement in treadles -or sewing machines, said patent being owned by plaintiff, as more fully appears from the complaint on file to which reference is made, and if you fail to appear and plead, answer, or demur, as herein required, your default will be entered and the plaintiff will apply to the court for the relief demanded.

Witness, the Honorable Melville W. Fuller, Chief Justice of the Supreme Court of the United States, this 8th day of October, in the year of our Lord one thousand eight hundred and ninety-six, and of our Independence the 121st.

[SEAL.]

W. J. COSTIGAN, *Clerk*,
By W. B. BEAIZLEY,
Deputy Clerk.

(Endorsed:)

UNITED STATES MARSHAL'S OFFICE,
NORTHERN DISTRICT OF CALIFORNIA.

I hereby certify, that I received the within writ on the 8th day of October, 1896, and personally served the same on Singer Mfg. Co. on the 8th day of October, 1896, by delivering to, and leaving with

Willis B. Fry, managing agent of said Singer Mfg. Co., said
8 defendant named therein, personally, at the city and county of San Francisco, in said district, a certified copy thereof, together with a copy of the complaint, certified to by plaintiff's attorney attached thereto.

San Francisco, October 9th, 1896.

BARRY BALDWIN,
United States Marshal,
By T. J. GALLAGHER, *Deputy.*

(Endorsed:) Filed Oct. 9th, 1896. W. J. Costigan, clerk. W. B. Beaizley, deputy clerk.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
SINGER MANUFACTURING COMPANY (a Corporation), Defendant. } No. 12259.

Answer.

Comes now the defendant above named, The Singer Manufacturing Company, by its attorneys Messrs. Wheaton, Kalloch & Kierce and Chas. K. Offield, without waiving its objection heretofore taken
9 to the jurisdiction of this court, over it, but hereby expressly continuing and maintaining and now renewing its objection to the taking of jurisdiction over the defendant in this case by this court, and hereby expressly reserving its exception to the taking of jurisdiction over it by this court, and denies generally and specifically each and every allegation contained in plaintiff's declaration on file herein, and says that the defendant is not guilty of the grievances in said declaration charged against it, nor of any of them, nor of any part thereof, and of this the defendant puts itself upon the country.

Further answering, this defendant admits that it is, and at all times in said declaration mentioned was, a corporation organized and existing under the laws of the State of New Jersey, and avers that its factories and manufacturing works are situated in the said State of New Jersey and in the district of New Jersey, and that its place of residence is in the said State and district of New Jersey, and that it has no factories, manufacturing works nor plant in the State of California or in the northern district of California, and that its principal place of business is not in said State or northern district of California, and that its place of residence is not in said State or northern district of California. That in the ordinary conduct of its business the defendant is engaged in selling throughout all the States and Territories of the United States sewing machines made at its said factories in the State of New Jersey, and that it employs agents and salesmen in a very large number of cities and towns in

the United States and Territories thereof, whose sole business
10 it is to receive and distribute and sell sewing machines consigned to them from the defendant's said factories in New Jersey, according to directions and instructions which are sent to said agents and salesmen from the principal place of business of this defendant; and defendant admits that it does business in the city and county of San Francisco as it does in other cities and towns, and that it employs in said city and county of San Francisco an agent to supervise the selling of sewing machines; but avers that said agent is a subordinate employee of this defendant, and acts for this defendant at all times under instructions and directions from superior officers of this defendant at defendant's principal place of business. This defendant therefore avers that it is entitled to be sued, if at all, in said district of New Jersey, and that this court has no jurisdiction over this defendant.

Further answering, defendant denies that the plaintiff is or ever was the original and first and sole or any inventor of the alleged improvements or any thereof in treadles -or sewing machines mentioned in said declaration and described in the letters patent mentioned in said declaration. Defendant denies that the said alleged improvements were at the time of the alleged invention thereof or are now new and useful or new or useful. Defendant further denies that the said alleged improvements in treadles for sewing machines or any thereof now are or ever were an invention within the meaning of the patent law. On the contrary, defendant avers that the first conception or origination of said so-called improvement or improvements involved no exercise whatever of the
11 inventive faculty, and that the first conception or origination thereof required nothing more than the usual knowledge of an ordinarily skilled mechanic.

Further answering, defendant denies that the said alleged invention or improvement or improvements or any thereof was not or were not known or used by others in this country before the alleged invention by the plaintiff, and denies that at the time of plaintiff's application for a patent therefor the said alleged invention or improvement or improvements had not been in public use for more than two years. Defendant denies that said alleged invention or improvement had not been abandoned by the plaintiff prior to his application for a patent therefor. On the contrary, defendant avers that said plaintiff was not the first or original or any inventor or discoverer of the alleged invention or improvement or inventions or improvements set forth in or intended to be claimed in said letters patent, but that the said alleged inventions or improvements were and each of them was substantially shown and described in the following-described letters patent and printed publications prior to the alleged invention thereof by the said plaintiff, to wit:

United States letters patent No. 106,242, bearing date August 9, 1870, and granted to Charles H. Wilcox, for a "sewing-machine table."

United States letters patent No. 148,759, bearing date March 17,

1874, and granted to John Reynolds and George Jacobie, for a "treadle for sewing machines."

United States letter patent No. 230,251, bearing date July 20, 1880, and granted to John E. Donovan, for a "sewing-machine treadle."

12 United States letters patent No. 243,529, bearing date June 28, 1881, and granted to John E. Donovan, for a "sewing-machine table frame and treadle."

United States letters patent No. 256,563, bearing date April 18, 1882, and granted to George W. Gregory, for "treadle support for sewing machines."

United States letters patent No. 253,212, bearing date February 7, 1882, and granted to John D. Lawlor, for an "improvement in treadles for sewing machines."

British letters patent No. 2,232, bearing date June 27, 1874, and granted by the government of Great Britain to Jules Bourdin, for "improvement in means for transmitting motive power to sewing machines."

British letters patent No. 2,653, bearing date August 7, 1873, and granted by the government of Great Britain to Josiah Turner for an "improvement in sewing machines."

Also in the "Sewing Machine Advance," a newspaper published in the city of Chicago, State of Illinois, by Walter Scates, in the issue or number of said newspaper dated June 15, 1881, on page 10[illegible] of said issue or number, in a sewing-machine advertisement by George P. Bent, in the middle of said page.

Also in a printed circular published and publicly distributed in the city of Chicago, State of Illinois, and elsewhere, in the years 1880, 1881, and 1882, by George P. Bent.

Further answering, defendant avers that it will prove upon the trial of this case that the alleged invention, improvement, and things described and claimed or intended to be described

13 and claimed in plaintiff's said letters patent were, and each of them was, long prior to the alleged invention thereof by said plaintiff, known to and used by the following-named persons during the years from 1862 to 1882, inclusive, at the following-named places, to wit:

At Cleveland, Ohio, by H. C. Smith, who then resided and who now resides at Cleveland, Ohio.

At Cincinnati, Ohio, by John E. Donovan, J. Skardon, and J. F. Elliott, who then resided and who now resides at Cincinnati, Ohio.

At Cincinnati, Ohio, by Wm. M. Burdge, who then resided at Cincinnati, Ohio, and who is now deceased.

At Cincinnati, Ohio, by Mrs. Wm. M. Burdge, who then resided and who now resides at Cincinnati, Ohio.

At Hartford, Connecticut, by George A. Fairfield, who then resided and who now resides at Hartford, Connecticut.

At Westfield, Massachusetts, by Albert L. Dewey, Richard E. Morgan, and Helen L. Dewey, who then resided and who now resides at Westfield, Massachusetts.

At Mount Sterling, Kentucky, by Philip L. Reese, who then resided and who now resides at Mount Sterling, Kentucky.

At Charlestown, Massachusetts, by Eben W. Keyes, who then resided and who now resides at Charlestown, Massachusetts.

At Chicago, Illinois, and in New York city, New York, by James Bolton, who then resided and who now resides at Chicago, Illinois.

At New York city, New York, by Lebbeus B. Miller, who
14 then resided and who now resides at Elizabethport, New Jersey.

At Chicago, Illinois, and Elizabeth, New Jersey, by Philip Diehl, who then resided and who now resides at Elizabethport, New Jersey.

At Cincinnati, Ohio, by Samuel C. Tatum, who then resided at Cincinnati, Ohio, and who is now deceased.

Also by George P. Bent, in the years 1880, 1881, and 1882, at the city of Chicago, State of Illinois, and also at the city of Kansas City, State of Missouri. Said George P. Bent then resided and now resides in said city of Chicago, State of Illinois.

Also by Susan Dilworth, in the years 1880, 1881, and 1882, at the city of Chicago, State of Illinois. Said Susan Dilworth then resided and now resides in said city of Chicago, State of Illinois.

Also by William H. Matchett, in the years 1880, 1881, and 1882, at the city of Chicago, State of Illinois, and at the city of Kansas City, State of Missouri. Said William H. Matchett then resided and now resides in said city of Chicago, State of Illinois.

Also by Walter Scates, in the year- 1880, 1881, and 1882, at the city of Chicago, State of Illinois. Said Walter Scates then resided and now resides in said city of Chicago, State of Illinois.

Also by Frank B. Davis, in the years 1880, 1881, and 1882, at the city of Chicago, State of Illinois. Said Frank B. Davis then resided and now resides at said city of Chicago, State of Illinois.

Also by William Walmsley, in the years 1880, 1881, and
15 1882, at the city of Chicago, State of Illinois. Said William Walmsley then resided in La Grange, county of Cook, State of Illinois, and now resides in said city of Chicago, State of Illinois.

Also by Thomas B. Jeffery, during the years from 1862 to 1882 both inclusive, at the city of Chicago, in the State of Illinois, and at the city of New York, in the State of New York. Said Thomas B. Jeffery then resided and now resides at said city of Chicago, State of Illinois.

Further answering as to the allegations in plaintiff's declaration contained regarding plaintiff's application for his said letters patent and regarding the issuance to plaintiff of said letters patent and regarding the proceedings had and taken prior to the issuance thereof, and regarding the ownership of said letters patent, and regarding the use by plaintiff of his said alleged invention, the defendant avers that it has no information concerning the facts alleged with regard to said matters, and therefore denies that on the 25th day of May, 1882, or at any other time, or at all, the plaintiff filed his application in the United States Patent Office for a patent for said alleged invention or improvement, and denies that on the 30th day of Jan-

uary, 1883, or at any other time, or at all, letters patent for said or any invention were issued and delivered or issued or delivered to said plaintiff, and denies that said or any letters patent granted to the said plaintiff, his heirs and assigns, or to any of them, for the term of seventeen years, or at all, any exclusive or other right or liberty to make, or to use, or to vent the said alleged invention or im-
16 provement throughout the United States and territories thereof. Defendant further denies that said letters patent were issued in due form of law, and denies that prior to the issuance of said letters patent, all proceedings were duly had and taken that were required by law to be had or taken prior to the issuance of letters patent for new and useful inventions.

Further answering, defendant denies that the plaintiff is now or ever was the sole and exclusive, or sole or exclusive, owner of the so-called invention set forth and claimed in and by said letters patent mentioned in said declaration, and denies that any right or privilege whatever was granted and secured, or granted or secured, by the said letters patent.

Further answering defendant denies that the plaintiff has made, used and sold, or made or used or sold, the device alleged to have been patented by him, and denies that the plaintiff has practiced his said alleged invention, and denies that the plaintiff has until the alleged infringement complained of maintained possession of the said alleged invention by virtue of his said letters patent or otherwise, and denies that the plaintiff has never acquiesced in any invasion or infringement of his said alleged rights.

Further answering, defendant denies that the defendant, either in violation of plaintiff's alleged rights, or disregarding the same, or contriving to injure or to damage the plaintiff or otherwise or at all either in the State of California and northern district thereof, or in any other State or in any Territory of the United States or anywhere else, has since the 30th day of January, 1883, or at
17 any other time, wrongfully or otherwise made or used or sold sewing machines or any sewing machines containing and embracing the said alleged invention or improvement described and claimed in and by plaintiff's said letters patent. Defendant further denies that any sewing machines which defendant has made or used or sold were or are, and denies that any of them ever was or is, an infringement of said letters patent numbered 271,426, and denies that they were or that any of them was made according to the specifications of said last-mentioned letters patent or contrary to the law and statutes of the United States.

Further answering, defendant denies that the plaintiff has ever been in any manner injured and damaged or injured or damaged on account of any act or acts of this defendant, and denies that by reason of any act or acts of this defendant the plaintiff has been deprived of large or any royalties, or of large or any license fees, or of large or any gains, or of large or any profits, which the plaintiff would otherwise have derived from the practice of his alleged invention, and denies that the plaintiff has sustained actual or any damages by reason of any act or acts of the defendant, either in the

sum of two hundred and fifty thousand dollars ($250,000), or in any other sum whatever or at all.

Further answering, defendant avers that the sewing-machine treadles which this defendant has manufactured and sold, and on account of the manufacture and sale of which this action has been commenced against the defendant, were all constructed under and according to the specifications and claims of certain letters
18 patent of the United States No. 306,469, bearing date October 14, 1884, and issued to this defendant as assignee of one Philip Diehl; and defendant further avers that ever since the issuance of said last-mentioned letters patent this defendant has had the right to make and sell sewing machines and sewing-machine treadles constructed according to the specifications and claims of said last-mentioned letters patent.

Defendant further avers that the state of the art relating to the manufacture of sewing machines and sewing-machine treadles, at the time of plaintiff's alleged invention and improvement in said treadles, as disclosed by the various letters patent hereinbefore cited, and by the testimony of the parties whose names are hereinbefore especially noticed and set forth, was such that plaintiff's said alleged invention or improvement, if any existed, was extremely narrow and trivial in its nature, and that the claims of his said patent were not and are not, and none of them has been or is, infringed by the manufacture or sale of treadles constructed according to the description contained in said letters patent No. 306,469, issued as aforesaid to this defendant as assignee of said Philip Diehl.

Defendant further avers that when said plaintiff made his original application to the United States Patent Office for his said patent, he represented to said Patent Office in the specification which accompanied his said application, that his invention consisted of a treadle having a bar with V-shaped ends and resting in sockets constructed in the brace of the machine, and further represented to said Patent Office that said V-shaped treadle
19 bar in the brace of the machine constituted the improvement or invention which he claimed. Defendant further avers that the specific elements and details of construction in combination, which are shown and described in the claims of plaintiff's said patent as they now appear therein, were not included in any claim or claims which accompanied plaintiff's said original application for said patent. Defendant further avers that plaintiff's said original application was rejected by said Patent Office, and that said Patent Office, at the time of the rejection of said original application, notified said plaintiff that his alleged invention was exhibited in United States letters patent No. 256,563, granted on April 18, 1882, to G. W. Gregory.

Defendant further avers that upon the rejection of plaintiff's said original application as aforesaid, the plaintiff filed in said Patent Office a new and first amended specification, and in his said new and first amended specification represented to said Patent Office and claimed that his invention consisted of the brace of a machine, having sockets or bearings for a treadle bar, with mufflers at the

end of the treadle bar, in combination with the treadle bar itself. Defendant further avers that the specific elements and details of construction in combination which are described and claimed in the claims of plaintiff's said patent, as they now appear therein, were not included in plaintiff's said first amended specification, nor in any claim or claims which accompanied plaintiff's said first amended specification. Defendant further avers that plaintiff's said application, when accompanied by said first amended specifi-
20 cation, was again rejected by said Patent Office, and that said Patent Office at the time of said last-mentioned rejection, notified said plaintiff that his alleged invention, as described in his said first amended specification, was met by United States letters patent No. 243,529, granted on June 28, 1880, to John E. Donovan.

Defendant further avers that upon the said last-mentioned rejection of his said application the plaintiff filed in said Patent Office a new and second amended specification, and in his said second amended specification represented to said Patent Office and claimed that his invention consisted in the specific elements and details of construction in combination, as the same now appear and are described and claimed in the claims of plaintiff's said patent.

Defendant further avers that it was only by thus limiting his claims to the precise combination of specifically mentioned elements and details of construction of which the claims of his said patent are now composed, that plaintiff was able to obtain the issuance of said patent at all, and that if he had not so limited his claim to invention in said Patent Office, no patent would have been granted to him at all.

Defendant further avers that by the aforesaid amendments of his specification, and by so, as aforesaid, limiting his claim to invention, the plaintiff entirely abandoned, in said Patent Office, any and all claims to a treadle hung or swinging generally in the brace of a machine, and is now estopped from asserting any claim to a treadle hung or swinging in the brace of a machine, excepting in
21 the precise combination and precise manner and in combination with the precise elements and exact details of construction shown and claimed in the claims of his said letters patent, as the same now appear.

Further answering, defendant avers that heretofore, to wit, on or about the thirty-first day of May, 1893, the plaintiff herein commenced an action in this court against this defendant and against one Willis B. Fry, as the managing agent of this defendant in the State and northern district of California. That said action was numbered 11,808 and was brought on account of alleged acts of infringement by this defendant and the said Willis B. Fry of the identical letters patent sued upon in this action. That the acts of alleged infringement which were charged in the declaration in said action No. 11,808 to have been committed by this defendant and the said Willis B. Fry were identically the same acts which are in the declaration herein alleged to have constituted infringements of the letters patent herein sued upon, and which are alleged in the declaration herein to have been committed by this defendant. That

in the course of its business of making and selling sewing machines this defendant has made and sold large numbers of sewing machines containing treadles and treadle mechanism constructed under and according to the specification and claims of those certain United States letters patent numbered 306,469, granted on October 14, 1884, to this defendant as assignee of Philip Diehl. That the making and selling of sewing-machine treadles constructed according to said last-mentioned letters patent constituted all the acts of alleged infringement which were charged in the declaration in said
22 action No. 11,808 to have been committed by this defendant or by the said Willis B. Fry. That in said action No. 11,808 this defendant made objection to the maintenance of said action against itself, upon the ground that this defendant was a resident of the district of New Jersey and not a resident of the northern district of California, and therefore that this court had no jurisdiction over this defendant; that said objection was sustained by this court, and the said action No. 11,808 was thereupon dismissed as to this defendant, and the said action No. 11,808 was thereafter proceeded with against the said Willis B. Fry only; that the said Willis B. Fry then was the general manager of the business of this defendant in the northern district of California and elsewhere on the Pacific coast in the business of selling sewing machines, and that the sole and only acts of infringement which were in said action No. 11,808 charged against the said Willis B. Fry consisted in the selling of sewing machines which contained treadles and treadle mechanism constructed according to the specification and claims of said Diehl letters patent No. 306,469 by the said Willis B. Fry, as this defendant's agent and manager. That upon the trial of said action No. 11,808 the plaintiff was permitted to prove and did prove the commission by this defendant of the acts which were charged in the declaration in said action to be infringements of plaintiff's patent, and was permitted to prove and did prove that this defendant had made and sold large numbers of sewing machines containing the treadles and treadle mechanism described in said Diehl letters patent No. 306,469. That in and during the trial of said
23 action No. 11,808 the treadles and treadle mechanism which had been made by this defendant, and which had been sold by said Willis B. Fry as the agent for this defendant, and which in said action were charged to infringe plaintiff's letters patent, were very carefully and very fully compared with the treadle and treadle mechanism described in the plaintiff's patent and alleged by the plaintiff to have been his invention; and this court thereupon, when the taking of testimony in said action No. 11,808 was concluded, decided that the making and selling of treadles and treadle mechanism constructed according to the specification and claims of the said Diehl letters patent No. 306,469 did not constitute any infringement of the plaintiff's patent, and this court thereupon ordered judgment to be entered in said action No. 11,808 in favor of the said defendant, Willis B. Fry, and against the said plaintiff, and judgment was accordingly so entered on the 12th day of April, 1895, and no appeal has ever been taken therefrom,

and the same has never been in any manner modified nor set aside, but is now in full force and effect.

This defendant further avers that the infringement and infringements of plaintiff's patent which are charged in the declaration herein to have been committed by this defendant consist entirely and solely of the making and selling of treadles and treadle mechanism constructed according to the specification and claims of the said Diehl letters patent No. 306,469, and that the plaintiff does not in this action charge this defendant with having infringed his said letters patent in any other manner than by making and sell-
24 ing treadles and treadle mechanism constructed according to the specification and claims of the said Diehl letters patent No. 306,469.

This defendant therefore avers that as the treadles and treadle mechanism which were made by this defendant, and which were sold by this defendant by and through its said agent, Willis B. Fry, were in said action No. 11,808, adjudged not to infringe the plaintiff's alleged invention and not to infringe the plaintiff's letters patent herein sued upon, the judgment in said action No. 11,808 is a bar to this action, and that the plaintiff ought not to be allowed to further prosecute this action against this defendant.

Further answering, defendant avers that the cause of action set forth in the declaration on file herein is and at the time of the commencement of this action was barred by section 339, and subdivision 1 thereof, of the Code of Civil Procedure of the State of California.

Further answering defendant avers that search by the attorneys for this defendant is now being made amongst printed publications for further expositions of the plaintiff's alleged invention, in the precise form in which the same is shown in his said letters patent, but that said attorneys have not been able to complete said search at the time of the preparation of this answer, and that defendant will hereafter, if it be so advised, ask permission of this court to amend its answer so as to incorporate therein the results of said search.

Wherefore, having fully answered plaintiff's declaration, the defendant demands that it be hence dismissed with its costs in this action incurred.

WHEATON, KALLOCH & KIERCE,
CHAS. K. OFFIELD,
Attorneys for Defendant.

25 Service of the above and foregoing answer and receipt of a copy thereof on this 18th day of March, 1897, is hereby admitted:

JNO. H. MILLER,
Attorney for Plaintiff.

(Endorsed:) Filed March 18th, 1897. W. J. Costigan, clerk.

In the Circuit Court of the United States for the Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
SINGER MANUFACTURING COMPANY, Defendant. } No. 12259.

Demurrer to Defendant's Answer.

Now comes Herman Cramer, the plaintiff in this action, by John H. Miller, his attorney, and demurs to all that separate and special defense set up in the defendant's answer between lines 15 on page 11 and line 28 on page 13, and for grounds of demurrer specify that the same does not state facts sufficient to constitute a defense to the action.

And the plaintiff also demurs to that separate and special defense set up in defendant's answer and included between lines 27
26 on page 13 and line 10 on page 17, and for grounds of demurrer specify that the same does not state facts sufficient to constitute a defense to the action.

Wherefore plaintiff prays judgment that the said two special defenses do not nor does either of them constitute any defense to the plaintiff's cause of action.

JOHN H. MILLER,
Attorney for Plaintiff.

Affidavit and Certificate of Counsel.

STATE OF CALIFORNIA,
City and County of San Francisco, } *ss:*

John H. Miller, being duly sworn, deposes and says that he is the attorney for the plaintiff in the above-entitled action; that in his judgment the foregoing demurrer is well taken in point of law; that the same is not interposed for the purpose of delay; that the said Herman Cramer is absent from the city and county of San Francisco, and for that reason counsel makes this affidavit.

JOHN H. MILLER.

Subscribed and sworn to before me this 29th day of March, 1897.

[SEAL.] J. N. TURNER,
Notary Public in and for the City and County of San Francisco, State of California.

Receipt of the within demurrer admitted this 29th day of March, A. D. 1897.

WHEATON, KALLOCH & KIERCE,
Attorneys for Defendants.

(Endorsed:) Filed March 29th, 1897. W. J. Costigan, clerk. By W. B. Beaizley, deputy clerk.

27 At a stated term, to wit, the March term, A. D. 1897, of the circuit court of the United States of America, of the ninth judicial circuit, in and for the northern district of California, held at the court-room in the city and county of San Francisco, on Monday, the 19th day of April, in the year of our Lord one thousand eight hundred and ninety-seven.

Present: The Honorable William W. Morrow, circuit judge.

HERMAN CRAMER
vs.
SINGER MANUFACTURING COMPANY. } No. 12259.

Order Sustaining Demurrer to Answer.

Upon motion of John H. Miller, Esq., counsel for plaintiff, ordered the order submitting motion to strike out parts — defendant's answer and demurrer to answer herein vacated and set aside and said motion to strike out withdrawn. Further ordered, demurrer to answer herein be sustained, pursuant to statement in defendant's brief on said demurrer to answer filed herein.

28 In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
SINGER MANUFACTURING COMPANY (a Corporation), Defendant. } No. 12259.

Amended Answer.

Comes now the defendant above-named, The Singer Manufacturing Company, by its attorneys, Messrs. Wheaton, Kalloch & Kierce, and Chas. K. Offield, and by leave of the court first had and obtained, files this its amended answer, and without waiving its objection heretofore taken to the jurisdiction of this court over it, but hereby expressly continuing and maintaining and now renewing its objection to the taking of jurisdiction over the defendant in this case by this court, and hereby expressly reserving its exception to the taking of jurisdiction over it by this court, denies generally and specifically each and every allegation contained in plaintiff's declaration on file herein, and says that the defendant is not guilty of the grievances in said declaration charged against it, nor of any of them, nor of any part thereof, and of this the defendant puts itself upon the country.

29 Further answering this defendant admits that it is and at all times in said declaration mentioned was a corporation organized and existing under the laws of the State of New Jersey, and avers that its factories and manufacturing works are situated in the said State of New Jersey and in the district of New Jersey, and that its place of residence is in the said State and district of

New Jersey, and that it has no factories, manufacturing works nor plant in the State of California, or in the northern district of California, and that its principal place of business is not in said State or northern district of California, and that its place of residence is not in said State or northern district of California. That in the ordinary conduct of its business the defendant is engaged in selling throughout all the States and Territories of the United States sewing machines made at its said factories in the State of New Jersey, and that it employs agents and salesmen in a very large number of cities and towns in the United States and Territories thereof, whose sole business it is to receive and distribute and sell sewing machines consigned to them from the defe nt's said factories in New Jersey, according to directions and instructions which are sent to said agents and salesmen from the principal place of business of this defendant; and this defendant admits that it does business in the city and county of San Francisco as it does in other cities and towns, and that it employs in said city and county of San Francisco an agent to supervise the selling of sewing machines; but avers that said agent is a subordinate employee of this defendant, and acts for this defendant at all times under instructions and direc-
30 tions from superior officers of this defendant at defendant's principal place of business. This defendant therefore avers that it is entitled to be sued, if at all, in said district of New Jersey, and that this court has no jurisdiction over this defendant.

Further answering, defendant denies that the plaintiff is or ever was the original and first and sole or any inventor of the alleged improvements or any thereof in treadles for sewing machines mentioned in said declaration and described in the letters patent mentioned in said declaration. Defendant denies that the said alleged improvements were at the time of the alleged invention thereof or are new and useful or new or useful. Defendant further denies that the said alleged improvements in treadles for sewing machines or any thereof now are or ever were an invention within the meaning of the patent law. On the contrary, defendant avers that the first conception or origination of said so-called improvement or improvements involved no exercise whatever of the inventive faculty, and that the first conception or origination thereof required nothing more than the usual knowledge of an ordinarily skilled mechanic.

Further answering, defendant denies that the said alleged invention or improvement or improvements, or any thereof was not or were not known or used by others in this country before the alleged invention by the plaintiff, and denies that at the time of plaintiff's application for a patent therefor the said alleged invention or improvement, or improvements, had not been in public use for more than two years. Defendant denies that said alleged invention
31 or improvement had not been abandoned by the plaintiff prior to his application for a patent therefor. On the contrary, defendant avers that said plaintiff was not the first or original or any inventor or discoverer of the alleged invention or improvement or inventions or improvements set forth in or intended to be claimed in said letters patent, but that the said alleged inventions

or improvements were, and each of them was, substantially shown and described in the following described letters patent and printed publications prior to the alleged invention thereof by the said plaintiff, to wit:

United States letters patent No. 106,242, bearing date August 9, 1870, and granted to Charles H. Wilcox, for a "sewing-machine table."

United States letters patent No. 148,759, bearing date March 17, 1874, and granted to John Reynolds and George Jacobie, for a "treadle for sewing-machines."

United States letters patent No. 230,251, bearing date July 20, 1880, and granted to John E. Donovan, for a "sewing-machine treadle."

United States letters patent No. 243,529, bearing date June 28, 1881, and granted to John E. Donovan, for a "sewing-machine table frame and treadle."

United States letters patent No. 256,563, bearing date April 18, 1882, and granted to George W. Gregory, for "treadle support for sewing machines."

United States letters patent No. 253,212, bearing date February 7, 1882, and granted to John D. Lawlor, for an "improvement in treadles for sewing machines."

British letters patent No. 2232, bearing date June 27, 1874,
32 and granted by the government of Great Britain to Jules Bourdin, for "improvement in means for transmitting motive power to sewing machines."

British letters patent No. 2653, bearing date August 7, 1873, and granted by the government of Great Britain to Josiah Turner for an "improvement in sewing machines."

Also in the "Sewing Machine Advance," a newspaper published in the city of Chicago, State of Illinois, by Walter Scates, in the issue or number of said newspaper dated June 15, 1881, on page 105 of said issue or number, in a sewing-machine advertisement by Geo. P. Bent, in the middle of said page.

Also in a printed circular published and publicly distributed in the city of Chicago, State of Illinois, and elsewhere, in the year 1880, 1881, and 1882, by George P. Bent.

Further answering, defendant avers that it will prove upon the trial of this case that the alleged invention, improvement, and things described and claimed, or intended to be described and claimed, on plaintiff's said letters patent were, and each of them was, long prior to the alleged invention thereof by said plaintiff, known to and used by the following-named persons during the years from 1862 to 1882, inclusive, at the following-named places, to wit:

At Cleveland, Ohio, by H. C. Smith, who then resided and who now resides at Cleveland, Ohio.

At Cincinnati, Ohio, by John E. Donovan, J. Skardon, and J. F. Elliott, who then resided, and who now resides, at Cincinnati, Ohio.

33 At Cincinnati, Ohio, by Wm. M. Burdge, who then resided at Cincinnati, Ohio, and who is now deceased.

At Cincinnati, Ohio, by Mrs. Wm. M. Burdge, who then resided, and now resides at Cincinnati, Ohio.

At Hartford, Connecticut, by George A. Fairfield, who then resided, and who now resides, at Hartford, Connecticut.

At Westfield, Massachusetts, by Albert L. Dewey, Richard E. Morgan and Helen L. Dewey, who then resided, and who now reside, at Westfield, Massachusetts.

At Mount Sterling, Kentucky, by Philip L. Reese, who then resided, and who now resides, at Mount Sterling, Kentucky.

At Charlestown, Massachusetts, by Eben W. Keyes, who then resided, and who now resides, at Charlestown, Massachusetts.

At Chicago, Illinois, and in New York city, New York, by James Bolton, who then resided, and who now resides, at Chicago, Illinois.

At New York city, New York, by Lebbeus P. Miller, who then resided, and who now resides, at Elizabethport, New Jersey.

At Chicago, Illinois, and Elizabeth, New Jersey, by Philip Diehl, who then resided, and who now resides, at Elizabethport, New Jersey.

At Cincinnati, Ohio, by Samuel C. Tatum, who then resided at Cincinnati, Ohio, and who is now deceased.

Also by George P. Bent, in the years 1880, 1881, and 1882, at the city of Chicago, State of Illinois, and also at the city of Kan-
34 sas City, State of Missouri. Said George P. Bent then resided, and now resides, in said city of Chicago, State of Illinois.

Also by Susan Dilworth, in the years 1880, 1881, and 1882, at the city of Chicago, State of Illinois. Said Susan Dilworth then resided, and now resides, in said city of Chicago, State of Illinois.

Also by William H. Matchett, in the years 1880, 1881, and 1882, at the city of Chicago, State of Illinois, and at the city of Kansas City, State of Missouri; said William H. Matchett then resided, and now resides, in said city of Chicago, State of Illinois.

Also by Walter Scates, in the years 1880, 1881, and 1882, at the city of Chicago, State of Illinois. Said Walter Scates then resided, and now resides, in said city of Chicago, State of Illinois.

Also by Frank B. Davis, in the years 1880, 1881, and 1882, at the city of Chicago, State of Illinois. Said Frank B. Davis then resided, and now resides, at said city of Chicago, State of Illinois.

Also by William Walmsley, in the years 1880, 1881, and 1882, at the city of Chicago, State of Illinois. Said William Walmsley then resided in La Grange, county of Cook, State of Illinois, and now resides in said city of Chicago, State of Illinois.

Also by Thomas B. Jeffery, during the years from 1862 to 1882, both inclusive, at the city of Chicago, in the State of Illinois, and at the city of New York, in the State of New York. Said Thomas B. Jeffery then resided, and now resides, at said city of Chicago, State of Illinois.

35 Further answering as to the allegations in plaintiff's declaration contained regarding plaintiff's application for his said letters patent, and regarding the issuance to plaintiff of

said letters patent, and regarding the proceedings had and taken prior to the issuance thereof, and regarding the ownership of said letters patent, and regarding the use by plaintiff of said alleged invention, the defendant avers that it has no information concerning the facts alleged with regard to said matters, and therefore denies that on the 25th day of May, 1882, or at any other time, or at all, the plaintiff filed his application in the United States Patent Office for a patent for said alleged invention or improvement, and denies that on the 30th day of January, 1883, or at any other time, or at all, letters patent for said or any invention were issued and delivered, or issued or delivered to said plaintiff, and denies that said or any letters patent granted to the said plaintiff, his heirs and assigns, or to any of them, for the term of seventeen years, or at all, any exclusive or other right or liberty to make, or to use, or to vend the said alleged invention or improvement throughout the United States and territories thereof. Defendant further denies that said letters patent were issued in due form of law, and denies that prior to the issuance of said letters patent all proceedings were duly had and taken that were required by law to be had or taken prior to the issuance of letters patent for new and useful inventions.

Further answering, defendant denies that the plaintiff is now or ever was the sole and exclusive, or sole or exclusive, owner
36 of the so-called invention set forth and claimed in and by said letters patent mentioned in said declaration, and denies that any right or privilege whatever was granted and secured, or granted or secured, by the said letters patent.

Further answering, defendant denies that the plaintiff has made, used and sold, or made or used or sold, the device alleged to have been patented by him, and denies that the plaintiff has practiced his said alleged invention, and denies that the plaintiff has until the alleged infringement complained of maintained possession of the said alleged invention by virtue of his said letters patent or otherwise, and denies that the plaintiff has never acquiesced in any invasion or infringement of his said alleged rights.

Further answering, defendant denies that the defendant either in violation of plaintiff's alleged rights or disregarding the same, or contriving to injure or to damage the plaintiff, or otherwise, or at all, either in the State of California and northern district thereof, or in any other State or in any territory of the United States or anywhere else, has since the 30th day of January, 1883, or at any other time, wrongfully or otherwise made or used or sold sewing machines, or any sewing machine, containing and embracing the said alleged invention or improvement described and claimed in and by plaintiff's said letters patent. Defendant further denies that any sewing machines which defendant has made or used or sold were or are, and denies that any of them ever was or is an infringement of said letters patent numbered 271,426, and denies that they were or that any of them was made according to the specifications
37 of said last-mentioned letters patent or contrary to the law and statutes of the United States.

Further answering, defendant denies that the plaintiff has ever

been in any manner injured and damaged, or injured or damaged, on account of any act or acts of this defendant, and denies that by reason of any act or acts of this defendant the plaintiff has been deprived of large or any royalties, or of large or any license fees, or of large or any gains, or of large or any profits, which the plaintiff would otherwise have derived from the practice of his alleged invention, and denies that the plaintiff has sustained actual or any damages by reason of any act or acts of the defendant, either in the sum of two hundred and fifty thousand dollars ($250,000), or in any other sum whatever, or at all.

Further answering defendant avers that the sewing-machine treadles which this defendant has manufactured and sold, and on account of the manufacture and sale of which this action has been commenced against the defendant, were all constructed under and according to the specifications and claims of certain letters patent of the United States, No. 306,469, bearing date October 14, 1884, and issued to this defendant as assignee of one Philip Diehl; and defendant further avers that ever since the issuance of said last-mentioned patent this defendant has had the right to make and sell sewing machines and sewing-machine treadles constructed according to the specifications and claims of said last-mentioned letters patent.

Defendant further avers that the state of the art relating to the manufacture of sewing machines and sewing-machine treadles,
38 at the time of plaintiff's alleged invention and improvement in said treadles, as disclosed by the various letters patent hereinbefore cited, and by the testimony of the parties whose names are hereinbefore especially noticed and set forth, was such that plaintiff's said alleged invention or improvement, if any existed, was extremely narrow and trivial in its nature, and that the claims of his said patent were not and are not, and none of them has been or is infringed by the manufacture or sale of treadles constructed according to the description contained in said letters patent No. 306,469, issued as aforesaid to this defendant as assignee of said Philip Diehl.

Defendant further avers that when said plaintiff made his original application to the United States Patent Office for his said patent, he represented to said Patent Office in the specification which accompanied his said application that his invention consisted of a treadle having a bar with V-shaped ends and resting in sockets constructed in the brace of the machine, and further represented to said Patent Office that said V-shaped treadle bar in the brace of the machine constituted the improvement or invention which he claimed. Defendant further avers that the specific elements and details of construction in combination, which are shown and described in the claims of plaintiff's said patent as they now appear therein were not included in any claim or claims which accompanied plaintiff's said original application for said patent. Defendant further avers that plaintiff's said original application was
39 rejected by said Patent Office, and that said Patent Office, at the time of the rejection of said original application, notified said plaintiff that his alleged invention was exhibited in

United States letters patent No. 256,563, granted on April 18, 1882, to G. W. Gregory.

Defendant further avers that upon the rejection of plaintiff's said original application as aforesaid, the plaintiff filed in said Patent Office a new and first amended specification, and in his said new and first amended specification represented to said Patent Office and claimed that his invention consisted of the brace of a machine, having sockets or bearings for a treadle bar, with mufflers at the end of the treadle bar, in combination with the treadle bar itself. Defendant further avers that the specific elements and details of construction in combination which are described and claimed in the claims of plaintiff's said patent, as they now appear therein, were not included in plaintiff's said first amended specification, nor in any claim or claims which accompanied plaintiff's said first amended specification. Defendant further avers that plaintiff's said application, when accompanied by said first amended specification, was again rejected by said Patent Office, and that said Patent Office at the time of said last-mentioned rejection, notified said plaintiff that his alleged invention, as described in his said first amended specification, was met by United States letters patent No. 243,529, granted on June 28, 1880, to John E. Donovan.

Defendant further avers that upon the said last-mentioned rejection of his said application, the plaintiff filed in said Patent Office a new and second amended specification, and in his said second amended specification represented to said Patent Office and claimed that his invention consisted in the specific elements and details of construction in combination, as the same now appear and are described and claimed in the claims of plaintiff's said patent.

Defendant further avers that it was only by thus limiting his claims to the precise combination of specifically mentioned elements and details of construction of which the claims of his said patent are now composed, that plaintiff was able to obtain the issuance of said patent at all, and that if he had not so limited his claim to invention in said Patent Office no patent would have been granted to him at all.

Defendant further avers that by the aforesaid amendments of his specification, and by so, as aforesaid, limiting his claim to invention, the plaintiff entirely abandoned, in said Patent Office, any and all claims to a treadle hung or swinging generally in the brace of a machine, and is now estopped from asserting any claim to a treadle hung or swinging in the brace of a machine, excepting in the precise combination and precise manner and in combination with the precise elements and exact details of construction shown and claimed in the claims of his said letters patent, as the same now appear.

Further answering, the defendant avers that owing to the restrictions and limitations imposed in the Patent Office upon the plaintiff's alleged invention, as hereinbefore set forth, and as shown in the file-wrapper and contents of plaintiff's said patent, and on account of the plaintiff's acquiescence in said restrictions and lim-

itations, the sewing-machine treadles which this defendant
41 has made and sold never have in any instance infringed and do not now infringe the plaintiff's said patent.

Further answering, defendants aver that heretofore, to wit, on or about the thirty-first day of May, 1893, the plaintiff herein commenced an action in this court against this defendant, and against one Willis B. Fry as the managing agent of this defendant in the State and northern district of California. That said action — numbered 11,808 and was brought on account of alleged acts of infringement by this defendant and the said Willis B. Fry of the identical letters patent sued upon in this action. That the acts of alleged infringement which were charged in the declaration in said action No. 11,808 to have been committed by this defendant and the said Willis B. Fry were identically the same acts which are in the declaration herein alleged to have constituted infringements of the letters patent herein sued upon, and which are alleged in the declaration herein to have been committed by this defendant. But in the course of its business of making and selling sewing machines this defendant has made and sold large numbers of sewing machines containing treadles and treadle machines constructed under and according to the specification and claims of those certain United States letters patent numbered 306,469, granted on October 14, 1884, to this defendant as assignee of Philip Diehl. That the making and selling of sewing-machine treadles constructed according to said last-mentioned letters patent constituted all the acts of alleged infringement which were charged in the declaration in said action No. 11,808 to have been committed by this defendant or by the said
42 Willis B. Fry. That in said action No. 11,808 this defendant made objection to the maintenance of said action against itself, upon the ground that this defendant was a resident of the district of New Jersey and not a resident of the northern district of California, and therefore that this court had no jurisdiction over this defendant; that said objection was sustained by this court and the said action No. 11,808 was thereupon dismissed as to this defendant, and the said action No. 11,808 was thereafter proceeded with against the said Willis B. Fry only. That the said Willis B. Fry then was the general manager of the business of this defendant in the northern district of California and elsewhere on the Pacific coast in the business of selling sewing machines, and that the sole and only acts of infringements which were in said action No. 11,808 charged against the said Willis B. Fry consisted in the selling of sewing machines which contained treadles and treadle mechanism constructed according to the specification and claims of said Diehl letters patent No. 306,469 by the said Willis B. Fry, as this defendant's agent and manager. That upon the trial of said action No. 11,808 the plaintiff was permitted to prove, and did prove, the commission by this defendant of the acts which were charged in the declaration in said action to be infringements of plaintiff's patent, and was permitted to prove, and did prove, that this defendant had made and sold large numbers of sewing machines containing the treadles and treadle mechanism described in said Diehl letters patent No. 306,469. That

in and during the trial of said action No. 11,808 the treadles and treadle mechanism which had been made by this defendant,
43 and which had been sold by said Willis B. Fry as the agent for this defendant, and which in said action were charged to infringe plaintiff's letters patent, were very carefully and very fully compared with the treadle and treadle mechanism described in the plaintiff's patent and alleged by the plaintiff to have been his invention; and this court thereupon, when the taking of testimony in said action No. 11,808 was concluded, decided that the making and selling of treadles and treadle mechanism constructed according to the specification and claims of the said Diehl letters patent No. 306,469 did not constitute any infringement of the plaintiff's patent, and this court thereupon ordered judgment to be entered in said action No. 11,808 in favor of the said defendant, Willis B. Fry, and against the said plaintiff, and judgment was accordingly so entered on the 12th day of April, 1895, and no appeal has ever been taken therefrom, and the same has never been in any manner modified nor set aside, but is now in full force and effect.

This defendant further avers that in said action No. 11,808, the said Willis B. Fry was made a defendant because of acts of alleged infringement committed by him in the usual course of his employment by this defendant, and within the scope of his said employment, and not otherwise, and that all the acts which were alleged in the declaration in said action No. 11,808 to constitute infringement of plaintiff's patent were and are identical with the acts which are in the declaration herein alleged to have been the defendant's acts of infringement. That this defendant by and through its attorneys, openly assumed control of the defense in said action
44 No. 11,808 and managed said defense at all stages thereof and throughout the trial of said action and until the judgment therein became final, and defrayed all the expenses of said defense.

This defendant further avers that the infringement and infringements of plaintiff's patent which are charged in the declaration herein to have been committed by this defendant consist entirely and solely of the making and selling of treadles and treadle mechanism constructed according to the specification and claims of the said Diehl letters patent No. 306,469, and that the plaintiff does not in this action charge this defendant with having infringed his said letters patent in any other manner than by making and selling treadle- and treadle mechanism constructed according to the specification and claims of the said Diehl letters patent No. 306,469.

This defendant therefore avers that as the treadles and treadle mechanism which were made by this defendant, and which were sold by this defendant by and through its said agent, Willis B. Fry, were in said action No. 11,808, adjudged not to infringe the plaintiff's alleged invention and not to infringe the plaintiff's letters patent herein sued upon, the judgment in said action No. 11,808 is a bar to this action, and that the plaintiff ought not to be allowed to further prosecute this action against this defendant.

Further answering, defendant avers that the cause of action set h in the declaration on file herein is and at the time of the com-

mencement of this action was barred by section 339, and subdivision 1 thereof, of the Code of Civil Procedure of the State of California.

45 Further answering, defendant avers that search by the attorneys for this defendant is now being made amongst printed publications for further expositions of the plaintiff's alleged invention, in the precise form in which the same is shown in his said letters patent, but that said attorneys have not been able to complete said search at the time of the preparation of this amended answer, and that defendant will hereafter, if it be so advised, ask permission of this court to further amend its answer so as to incorporate therein the results of said search.

Wherefore, having fully answered plaintiff's declaration the defendant demands that it be hence dismissed with its costs in this action incurred.

WHEATON, KALLOCH & KIERCE AND
CHAS. K. OFFIELD, *Attorneys for Defendant.*

Service of the above and foregoing amended answer and receipt of a copy thereof on this 27th day of May, 1897, is hereby admitted.

JNO. H. MILLER,
Per H. T.,
Attorney for Plaintiff.

(Endorsed:) Filed May 27, 1897. W. J. Costigan, clerk. By W. B. Beaizley, deputy clerk.

46 In the Circuit Court of the United States for the Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
SINGER MANUFACTURING COMPANY, Defendant. } No. 12259.

Verdict.

We, the jury, find in favor of the defendant.

J. E. H. MEYER, *Foreman.*

(Endorsed:) Filed August 10, 1898. Southard Hoffman, clerk. By W. B. Beaizley, deputy clerk.

UNITED STATES OF AMERICA:

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
SINGER MANUFACTURING COMPANY (a Corporation), Defendant. } No. 12259.

Judgment on Verdict.

47 This cause came — regularly for trial. The said parties appeared by their attorneys. A jury of 12 persons was regularly impaneled and sworn to try said cause. Witnesses on the part of plaintiff and defendant were sworn and examined. After hearing the evidence, arguments of counsel and instructions of the court, the jury being instructed by the court so to do presented the following verdict:

"We, the jury, find in favor of the defendant."

Wherefore, by virtue of the law, and by reason of the premises aforesaid, it is ordered, adjudged, and decreed that said plaintiff take nothing by this action; that said defendant go hereof without day, and that said defendant recover from said plaintiff its costs and disbursements incurred in this action, amounting to the sum of $56.40.

Entered this 10th day of August, A. D. 1898.

SOUTHARD HOFFMAN, *Clerk.*

A true copy.
Attest:
[SEAL.] SOUTHARD HOFFMAN, *Clerk.*

(Endorsed:) Filed August 10, 1898. Southard Hoffman, clerk.

48 In the Circuit Court of the United States, Ninth Judicial Circuit, in and for the Northern District of California.

HERMAN CRAMER
vs.
SINGER MANUFACTURING COMPANY. } No. 12259.

Certificate to Judgment-roll.

I, Southard Hoffman, clerk of the circuit court of the United States, for the ninth judicial circuit, northern district of California, do hereby certify that the foregoing papers hereto annexed constitute the judgment-roll in the above-entitled action.

Attest my hand and the seal of said circuit court, this 10th day of August, 1898.

[SEAL.] SOUTHARD HOFFMAN, *Clerk,*
By W. B. BEAIZLEY, *Deputy Clerk.*

(Endorsed:) Filed August 10th, 1898. Southard Hoffman, clerk. By W. B. Beaizley, deputy clerk.

49 At a stated term, to wit, the July term, A. D. 1899, of the circuit court of the United States of America, of the ninth judicial circuit, in and for the northern district of California, held at the court-room in the city and county of San Francisco, on Saturday, the 28th day of October, in the year of our Lord one thousand eight hundred and ninety-nine.

Present: The Honorable William W. Morrow, circuit judge.

HERMAN CRAMER
vs.
SINGER MANUFACTURING COMPANY. } No. 12259.

Order Spreading Mandate on Minutes.

It was ordered that the mandate of the United States circuit court of appeals for the ninth circuit herein be filed and spread upon the minutes of the court, viz:

Mandate.

UNITED STATES OF AMERICA, *ss:*

[SEAL.] The President of the United States of America to the honorable the judges of the circuit court of the United States for the northern district of California, Greeting:

Whereas, lately in the circuit court of the United States for the northern district of California, before you, or some of you, in
50 a cause between Herman Cramer, plaintiff, and Singer Manufacturing Company (a corporation), defendant, No. 12,259, a judgment was duly filed and entered in said cause in said circuit court, which said judgment is of record in the office of the clerk of said circuit court and in the words and figures following, to wit:

"This cause came on regularly for trial. The said parties appeared by their attorneys. A jury of twelve persons was regularly impaneled and sworn to try said cause. Witnesses on the part of plaintiff and defendant were sworn and examined. After hearing the evidence, arguments of counsel, and instructions of the court, the jury being instructed by the court so to do, presented the following verdict: 'We, the jury, find in favor of the defendant.'

"Wherefore, by virtue of the law, and by reason of the premises aforesaid, it is ordered, adjudged, and decreed that said plaintiff take nothing by this action; that said defendant go hereof without day, and that said defendant recover from said plaintiff its costs and disbursements incurred in this action, amounting to the sum of $56.40.

"Entered this 10th day of August, A. D. 1898.

"SOUTHARD HOFFMAN, *Clerk.*"

as by the inspection of the transcript of the record of the said circuit court, which was brought into the United States circuit court of appeals, for the ninth circuit, by virtue of a writ of error agreeably to the act of Congress, in such cases made and provided, fully and at large appears:

51 And whereas, in the present term of October, in the year of our Lord one thousand eight hundred and ninety-eight, the said cause came on to be heard before the said court of appeals, on the said transcript of record, and was argued by counsel:

On consideration whereof, it is now here ordered and adjudged by this court that the judgment of the said circuit court in this cause be, and the same is hereby, reversed, with costs, and the cause is remanded to said circuit court for a new trial. (Feb. 13, 1899.)

You, therefore, are hereby commanded that such new trial and further proceedings be had in said cause, in accordance with the opinion and judgment of this court and as according to right and justice, and the laws of the United States, ought to be had, the said judgment of said circuit court notwithstanding.

Witness, the Honorable Melville W. Fuller, Chief Justice of the United Statos, the 24th day of June, in the year of our Lord one thousand eight hundred and ninety-nine.

F. D. MONCKTON,
Clerk of the United States Circuit Court of Appeals for the Ninth Circuit.

Costs of Plaintiff in Error.

Trans. clerk C. C.	$56.30
Clerk C. C. A.	25.85
Printing record	118.25
Attorney	20.00
Taxed at	$220.40

F. D. MONCKTON, *Clerk.*

52 *Costs of Plaintiff in Error.*

Transcript, clerk, circuit court	$56.30
Docketing cause and filing record	5.00
Entering 2 appearances	.50
Entering 4 orders	.80
Filing 6 papers.	1.50
Filing briefs	10.00
Transferring cause to printed calendar	1.00
Drawing, filing, and recording judgment	1.65
Mandate	5.40
Printing record, C. C. A.	118.25
Docket fee (attorney's)	20.00
Taxed at	$220.40

F. D. MONCKTON, *Clerk.*

(Endorsed:) Filed and spread upon minutes October 28, 1899 Southard Hoffman, clerk. By W. B. Beaizley, deputy clerk.

53 In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
THE SINGER MANUFACTURING COMPANY (a Corporation), Defendant. } No. 12259.

Defendant's Supplemental Plea.

Comes now the defendant above named, The Singer Manufacturing Company, by this its supplemental plea to the declaration of plaintiff on file herein, and says that said plaintiff ought not farther to have or maintain this action against the defendant because of matters and things which have arisen since the filing of defendant's answer herein, as follows, to wit:

The above-entitled action was commenced in the month of October, 1896, and issue in said action was finally joined in the month of April, 1897. That said action was brought for the purpose of obtaining a judgment for damages against the said defendant upon the ground of alleged infringements by said defendant, in the State of California and elsewhere in the United States, of letters patent No. 271,426, granted to said plaintiff on January 30th, 1883, for a treadle for sewing machines.

54 That on the 15th day of August, 1899, the said plaintiff, Herman Cramer, commenced in this court a suit in equity, numbered 12,802, against this defendant, and on the 17th day of November, 1899, caused a writ of subpœna to be served upon this defendant, and on December 4th, 1899, the appearance of this defendant in said suit in equity was duly entered in this court, and that said suit in equity is now pending in this court. That said suit in equity was brought on account of alleged infringements by said defendant, in the State of California and elsewhere in the United States, of United States letters patent No. 271,426, granted to said plaintiff on January 30th, 1883, for a treadle for sewing machines, and was brought for the purpose of obtaining a decree for an injunction against said defendant, and for the recovery of the damages alleged to have been sustained by said plaintiff by reason of said alleged infringement, and for the recovery of the gains and profits alleged to have been realized by said defendant on account of said alleged infringements.

That the cause of action set forth and alleged in the declaration herein is the same as the cause of action set forth and alleged in the bill of complaint in said suit in equity; that the parties in this action are the same as the parties in said suit in equity; that all the relief which the plaintiff asks or is entitled to in this action he also asks and is equally entitled to have in said suit in equity; that in said suit in equity this court has jurisdiction to grant not only

all the relief which can possibly be obtained in this action, but also much greater and *come* extensive relief.

55 That by reason of the premises the plaintiff now has two actions pending in this court against the defendant for one and the same alleged cause of action, which said actions the plaintiff has no right to have and maintain at the same time.

That the commencement by plaintiff of said suit in equity was not known to this defendant or its agents or attorneys until the day of said service of subpœna, to wit, November 17th, 1899, and that this plea is prepared as soon after said last-named date as possible.

All of which matters and things this defendant avers to be true, and therefore prays the judgment of this honorable court whether the said plaintiff, Herman Cramer, ought further to have or maintain this action against the said defendant, and prays to be hence dismissed with its costs.

CHAS. K. OFFIELD,
M. A. WHEATON,
I. M. KALLOCH,
Attorneys for Defendant.

I hereby certify that in my opinion the foregoing plea is well founded in point of law.

I. M. KALLOCH,
Attorney for Defendant.

UNITED STATES OF AMERICA,
Northern District of California,
City and County of San Francisco, } *ss:*

C. A. Chandler, being duly sworn, deposes and says that he is the managing agent in San Francisco for the defendant above named. That the foregoing plea is true in point of fact and is not interposed for delay.

C. A. CHANDLER.

56 Subscribed and sworn to before me this 15th day of December, 1899.

[SEAL.] HENRY M. McGILL,
Notary Public in and for the City and County of San Francisco, State of California.

Service of within plea and receipt of a copy thereof on this 15th day of December, 1899, is admitted.

JNO. H. MILLER,
Per H. T.,
Plaintiff's Attorney.

(Endorsed:) Filed December 15, 1899. Southard Hoffman, clerk. By W. B. Beaizley, deputy clerk.

In the Circuit Court of the United States for the Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
SINGER MANUFACTURING Co., Defendant. } No. 12259.

Amendment to Declaration.

Now comes plaintiff in the above-entitled action, by his attorney, and by leave of court first had and obtained makes this amendment to his declaration on file in said action, to wit:

1. After the words "said rights," in line 23 on page 3 of 57 said declaration, insert the following: "That upon all of the sewing machines containing the said patented invention made and sold by the plaintiff was fixed the word 'patented,' together with the day and year the said patent was granted."

Strike out the words "and in various and sundry other States and Territories of the United States of America," appearing in lines 7 and 8 on page 4 of said declaration.

JOHN H. MILLER,
Attorney for Plaintiff.

(Endorsed:) Filed March 28, 1900. Southard Hoffman, clerk.

In the Circuit Court of the United States for the Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
SINGER MANUFACTURING COMPANY (a Corporation), Defendant. } No. 12259.

Verdict.

We, the jury, find in favor of the plaintiff and assess the damages at the sum of $12,456.00.

R. S. ALEXANDER, *Foreman.*

(Endorsed:) Filed April 20, 1900. Southard Hoffman, clerk. By W. B. Beaizley, deputy clerk.

58 In the Circuit Court of the United States for the Ninth Judicial Circuit in and for the Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
SINGER MANUFACTURING COMPANY (a Corporation), Defendant. } No. 12259.

Judgment.

This cause came on regularly for trial on the 28th day of March, 1900, before the court and a jury of twelve men duly impaneled and sworn to try the issues joined herein. John H. Miller and J. F. Fassett, Esqs., appeared on behalf of the plaintiff, and M. A. Wheaton, I. M. Kalloch and Charles K. Offield, Esqs., appeared on behalf of the defendant. Thereupon the trial having been proceeded with, and the evidence, oral and documentary, upon behalf of the respective parties having been introduced and closed, and the cause after arguments of counsel and the instructions of the court having been submitted to the jury, and the jury after
59 due deliberation having returned the following verdict, to wit: "We, the jury, find in favor of the plaintiff and assess the damages at the sum of $12,456.00. (Signed) R. S. Alexander, foreman," and the court having ordered that judgment be entered herein in accordance with said verdict and for costs:

Now, therefore, by virtue of the law and by reason of the premises aforesaid, it is considered by the court that said plaintiff, Herman Cramer, do have and recover of and from said defendant, Singer Manufacturing Company, a corporation, the sum of twelve thousand four hundred and fifty-six dollars ($12,456.00), together with his costs in this behalf expanded, taxed at $219.00.

Judgment entered April 20th, 1900.

SOUTHARD HOFFMAN, *Clerk.*

A true copy.
Attest:
[SEAL.]

—— ——, *Clerk.*

(Endorsed:) Filed April 20, 1900. —— ——, clerk.

60 In the Circuit Court of the United States, Ninth Judicial Circuit, in and for the Northern District of California.

HENRY CRAMER
vs.
SINGER MANUFACTURING COMPANY. } No. 12259.

Certificate to Judgment-roll.

I, Southard Hoffman, clerk of the circuit court of the United States for the ninth judicial circuit, northern district of California, do hereby certify that the foregoing papers hereto annexed constitute the judgment-roll in the above-entitled action.

Attest my hand and the seal of said circuit court, this 20th day of April, 1900.

[SEAL.] SOUTHARD HOFFMAN, *Clerk.*

(Endorsed:) Filed April 20th, 1900.

61 In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
THE SINGER MANUFACTURING COMPANY, Defendant. } No. 12259.

Defendant's Bill of Exceptions.

Be it remembered that the above-entitled cause came on regularly for trial on March 28th, 1900, before the above-entitled court, J. H. Miller, Esq., appearing for the plaintiff, and Chas. K. Offield, Esq., M. A. Wheaton, Esq., and I. M. Kalloch, Esq., appearing for the defendant. A jury having been duly impaneled and sworn to try the case, proceedings were had and testimony taken as follows:

An opening statement was made to the jury by plaintiff's attorney, and also by M. A. Wheaton, Esq., for the defendant.

HERMAN CRAMER, the plaintiff, was then called on his own behalf and sworn, and testified as follows:

62 I am the plaintiff in this case. I reside in Sonora, Tuolumne county. I am 65 years old. I have resided in Tuolumne county continuously since 1856, only when I would be absent from home upon my route selling machines through the different counties. I am the same Herman Cramer to whom letters patent No. 271,426 were issued, which form the subject-matter of this suit. This is a copy of that patent which is now handed to me.

(Plaintiff's counsel then introduced in evidence a copy of the specification and drawings of the letters patent sued upon, the same being No. 271,426, dated January 30, 1883, and granted to Herman Cramer, the following being a copy thereof, marked Plaintiff's Exhibit "A.")

Plaintiff's Exhibit "A"

63

(No Model.)

H. CRAMER.

TREADLE FOR SEWING MACHINES, &c.

No. 271,426. Patented Jan. 30, 1883.

Fig. 1.

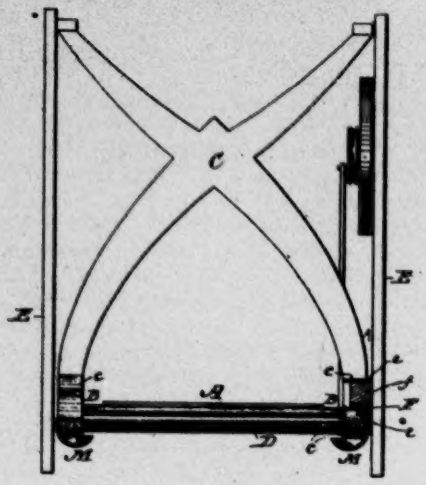


Fig. 2.

No. 607 Singer Co. } p. 63 v. Cramer.

WITNESSES:
W. B. Brown
W. L. Greene

INVENTOR:
H. Cramer
BY Munn & Co
ATTORNEYS.

64 UNITED STATES PATENT OFFICE.

HERMAN CRAMER, of Sonora, California.

Treadle for Sewing-machines, &c.

Specification forming part of Letters Patent No. 271,426, dated January 30, 1883. Application filed May 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, Herman Cramer, of Sonora, in the county of Tuolumne and State of California, have invented a new and improved sewing-machine treadle; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in the bearings of sewing-machine treadles; and it has for its object to provide means, first, to keep the treadle-bearings rigidly in line and at a fixed distance apart to avoid friction, and, second, to make its movement in use noiseless.

To this end my invention consists in the construction and combination of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which—

(Here follows diagram marked p. 63.)

Figure 1 is a perspective view of a portion of a sewing-machine, showing my invention. Fig. 2 is a transverse vertical section through one bearing of the treadle.

A represents the treadle, provided with the usual pitman-connection by which to run the sewing-machine wheel.

B represents the two trunnions, cast as a portion of the treadle and extending from its sides into loop-holes in the common cast-iron cross-brace, C. These trunnions are sharpened to an edge or corner along their lower sides, and the lower end of the loop-hole is hollowed to an angle more obtuse than the edge of the trunnion, to serve as a bearing for the same and permit the rocking motion common to treadles.

C represents the usual cast-iron double brace connecting the two end legs diagonally in a plane generally vertical. The lower ends of this brace are secured directly to the web of the legs by bolts *d*, and for convenience and strength I make the two ends of the common cross-bar, D, serve as these bolts. The upper ends of the brace are secured, as usual, either to the web of the legs or to the table of the machine, near the legs.

The treadle and its trunnion-bearings are wholly independent of the cross-bar D, except its service, as stated, to hold the brace to the legs. The bearing-holes in the brace are formed into long vertical loops to permit the entrance of the treadle.

Pieces of leather, F, or other soft material cover the top and end of each trunnion, to serve as cushions to keep the same close in its bearing, to prevent the noise which would result were the trunnions permitted to bounce and thump endwise, when the treadle is in motion. The leather F is fitted to the curve of the upper side of the trunnion, which is an arc of a cylinder whose center of oscillation is the lower edge of the trunnion. The same leather also interposes between the end of the trunnion and the adjacent iron. *f* is a block serving as a mere backer, to which the cushion F is attached. This block conforms to the back and top side of the cushion and fills the loop-hole in the brace above the trunnion. It also has tangs or projections *e*, resting in suitable recesses in the brace C, which are held between the brace and the web of the leg E, by which means the block and cushion are held in place.

Below the bearings of the trunnions B, I provide cups M, attached to the ends of brace C, to catch the oil that usually drips from such bearings. By this construction my treadle-bearings are rigidly fixed, and in no way liable to get out of line or to require adjustment. The usual noise is prevented and overflowing oil is caught before it can do damage.

I am aware that sewing-machine treadles have before been provided with V-shaped bearings, and I do not claim the same as my invention; but

What I claim, and wish to secure by letters patent, is—

1. The vertical double brace joining the legs of the two ends of a sewing-machine, provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings, substantially as specified.

2. The sewing-machine legs E, the vertical double brace C, secured thereto and provided with holes to serve as bearings for the treadle A, and the treadle provided with trunnions B to oscillate in said bearings, in combination with the cushion F and the block *f*, as and for the purpose specified.

HERMAN CRAMER.

Witnesses:
FRANK W. STREET.
CHARLES L. STREET.

65 Mr. MILLER: Before reading it to the jury, if your honor please, I would like to offer in evidence the model so that at the time I read it to the jury the model can be before them, and they will be the better able to understand it.

The COURT: Produce the model.

Mr. MILLER:

Q. Mr. Cramer, what does this model I now show you represent?

A. That represents my patent in the shape of a double vertical brace, a cross-brace, as some may call it.

Q. Mr. Cramer, will you point out with this stick the various parts of this model, and name them?

A. This is the foot piece, usually called the treadle, having its bearings upon the vertical double brace—cross-brace some of them call it, from the fact that it goes across from one side to the other, but it is a vertical cross-brace, and having the bearings upon that, is the invention.

Q. Never mind about the invention. I want you to point out the parts of this model so the jury will be enabled to understand its operation.

A. This is the treadle, and that is the cross-piece, and the action of the foot oscillates the treadle up and down and produces the motion and conveys it to the wheel. Is that right?

Q. Yes. Those two side pieces, what are they?

A. They are the legs.

Q. And what is this device underneath here?

A. That is the tie-rod, the one that holds the frame together.

66 Q. What is the object of this vertical brace that you have here?

A. To stiffen it—stiffen the frame; the whole frame stiffens. That is the object of the brace.

Q. How is the treadle mounted?

A. This one is mounted, I think, on knife-edged bearings. (Examines model.) Yes, that has knife-edge bearings.

Q. Just explain where the knife-edge bearings are.

A. The knife-edge bearings are on this piece here.

Q. Is this treadle which I now hold a duplicate of the one you have there?

A. Yes, sir. They will all fit in there.

Q. And the ends of it that are pointed here you say are beveled down so as to make a knife-edge bearing?

A. So as to be a knife-edge bearing.

Q. And that knife-edge works, then, in a groove, does it?

A. Yes, sir.

JUROR:

Q. What is the object of these cones upon the ends of the knife-edge?

A. You could use point centers there, if you wished.

Mr. MILLER:

Q. Here is another one. This is a full-sized treadle, isn't it?

A. Yes, sir; that is full sized.

Q. That has the knife-edge bearing upon it also, has it?

A. Yes, sir.

Q. And those knife-edge bearings work in a groove as they oscillate, you say?

A. Yes, sir. They work in the groove of the double vertical cross-brace.

67 Mr. MILLER: We offer this first model about which I have questioned the witness, as a model representing the patented invention, and ask that it be marked Plaintiff's Exhibit "B."

(The model referred to was here introduced in evidence and marked Plaintiff's Exhibit "B.")

Mr. MILLER: We will also offer in evidence the brass treadle that was referred to by the witness, and ask that it be marked Plaintiff's Exhibit "C."

(The treadle referred to was here introduced in evidence and marked Plaintiff's Exhibit "C.")

Mr. MILLER: We also offer in evidence the full-sized iron treadle that was referred to by the witness, and ask that it be marked Plaintiff's Exhibit "D."

(The treadle referred to was here introduced in evidence and marked Plaintiff's Exhibit "D.")

Mr. MILLER:

Q. In regard to this last model, Mr. Cramer, I understand you to say that these knife-edges worked in a grooved socket?

A. Yes, sir; that is it.

Q. Where is the grooved socket located in the machine?

A. In the lower end of the double vertical brace.

Q. This vertical brace which is shown there?

A. Right there; yes, sir (showing).

Mr. MILLER: With the court's permission, I will now read the patent to the gentlemen of the jury, and here are some copies that you gentlemen can follow me with. I will not read the formal parts of the patent.

(The patent, Exhibit "A," was here read to the jury.)

The COURT: What is the essential element of the second claim?

68 Mr. MILLER: I was going to say, if your honor please, that the essential element of the second claim is the cushion and the block. We do not charge any infringement of claim 2. It is only as to claim 1 that we charge infringement.

The COURT: Then the essential elements of the second claim are the cushion F and the block *f*?

Mr. MILLER: The cushion F and the block *f*, yes. That is the essential element of that claim which differentiates it from the other claim.

Mr. OFFIELD: That is the only difference, Mr. Miller, between the two claims.

Mr. MILLER: That is the way I read it. That is the only difference. And as there is no pretense that they have used the cushion F and the block *f*, if your honor please, we do not charge infringement of that claim.

The COURT: Then this suit is upon what you claim to be the essential element of claim 1, the vertical double brace?

Mr. MILLER: Yes, your honor, in combination with the treadle.

The COURT: I understand; but the essential element is the treadle mounted in the double brace?

Mr. MILLER: Not quite that. The essential element is not the treadle in that vertical brace. It is the combination of the treadle

and brace. *It is the combination of the treadle and brace.* Our contention being that prior to that time the treadle had not been mounted in the brace, and that the plaintiff in this case combined the brace and treadle together.

69 The COURT: Then we have the double brace in combination with the treadle as the essential element of the claim.

Mr. MILLER: Yes.

Q. Mr. Cramer, when was your attention first called to sewing machines, and when did you first have anything to do with sewing machines?

A. In the year 1861, I got married. Shortly thereafter—you will please excuse my feebleness; I cannot help it. I would like to make a little remark upon that. I instructed one of the men to get somebody here to help me with this work, and it has exhausted me a good deal, but the party failed to be on hand, and therefore it accounts for this feebleness on my part.

Q. When did you first make these machines?

A. In 1861 I was married, and shortly thereafter my wife bought a sewing machine, and the result of that was I had to fix it every time she had any sewing to do. It was then the common chain-stitch machine. They were just hand machines. Shortly thereafter I was sick, and was laid up for a long time, crippled up, and in consequence of that my attention was called to getting her a good sewing machine; that is, I wanted to get her a good one; and I found they were all imperfect, more or less—or rather, before that, I went and bought sewing machines that were double-threaded machines. Those former ones were hand machines and chain-stitch machines. They were a very bothersome machine. So I got a machine called the Erie Shuttle from the East, which was quite

70 an improvement on the chain-stitch machine, but somehow I soon found better ones. I found a machine called the Home Shuttle, and I sold them throughout the county in baskets and just the way I could sell them, and I got a number of them, and I procured treadles, that is, the lower piece—all these were hand machines and there was no treadle, no foot power. I found they would not work well with the foot power, from the fact that the treadles or these foot pieces here would continually get loose and make a terrible racket, causing uniform motion to the machine, and the uniformity of motion communicated to the top was an irregular motion to the top, and hence they would drop a stitch and would not work well. As far as that as a machine was concerned for my own wife, I didn't like it, although I sold them as, of course, the best I had. So finally I got hold of the American machine, and from their circular and from my own judgment it was the best machine there was in the market, having superior points, but I found the treadle motion to be no better than any other. The treadle motion was on these cone set-screws. That, in the first place, they were not square on the rod, always loose——

Q. (Interrupting.) One moment, Mr. Cramer. I will come to that later. There are one or two points I want to get at before we

come to that. You say you were engaged in the business of selling sewing machines up in Tuolumne county?

A. Yes, sir.

Q. What years were you selling them there in that way?

A. Well, in 1876, 1875—somewhere along there, I got hold of the American, but before that I sold the hand machines, and

71 from that onward—first, I hired a wagon, and traded off sewing machines for a wagon after that, and then got horses that way, and then I worked myself up into a big trade.

Q. I want to get at the time. When was it that you were selling the American machines?

A. I think the first machine I got was in 1875 or 1876.

Q. How long did you continue to sell the American machines that way?

A. Right straight along.

Q. And where were you selling them?

A. In Sonora, Tuolumne county, and in Stanislaus, Calaveras, Mariposa, and San Joaquin counties.

Q. Along about in 1880, what occurred in regard to these machines?

A. As I was selling their machines, I put the machines into the best possible fix I could put them in, as to building up my trade and giving the best satisfaction to my customers. So in that way I kept experimenting on machines continually in improving, and in that way, by improving from time to time, I noticed that if I could only overcome that difficulty of the treadle, that it would be a fortune to me, if I could only overcome that. In fact, all the machines had that trouble.

Q. What was this difficulty about the treadle that you are talking about?

A. It would continually get loose and out of line, and the action of the foot would spread these legs, and when spread, they would flop on the bar backward and forward, and——

Q. (Interrupting.) One moment. What does this model represent? (Showing.)

72 A. That represents the old-style treadle.

Q. You mean before your invention?

A. Before my invention; yes, sir.

Q. What is this rod that goes through there? (Pointing.)

A. That is the tie-rod that holds the legs to the frame of the machine.

Q. This rod holds the two legs together?

A. Yes, sir; that rod holds the two legs together.

Q. What are these devices on here that are jammed up against the treadle?

A. Those are collars.

Q. What is the shape of these collars on the inside there?

A. There is a hole through the center of those collars, and they may have similar-shaped collars in the treadle.

Q. What do you call these here? (Showing.)

A. They are called "cones."

Q. Was that term known in sewing machines?
A. Yes, sir. That term "cones" was known in sewing machines.
Q. And on top of that is the set-screw?
A. Yes, sir; on top of that is the set-screw.
Q. This treadle is mounted on that rod, is it not?
A. Mounted on that rod; yes, sir.
Q. And the object of these cones and set-screws is to hold it in place?
A. Yes, sir; to hold it in place.
Q. And if they get loose, you could take a turn of the set-screws and make them tighter?
A. Yes, sir; and if you get them too tight, you can ease it up.

73 Q. When this treadle worked backwards and forwards on this rod here, what was the effect it had on the cones?

A. It would spread the cones, and work this loose. They were continually working loose.
Q. Was this a style of making the treadle that was in use prior to the time you got up your invention?
A. It was.

Mr. MILLER: We offer this in evidence, and ask that it be marked Plaintiff's Exhibit "E."
(The model referred to was here introduced in evidence and marked Plaintiff's Exhibit "E.")

Q. In that case, the treadle was mounted on the rod which tied the two legs together, was it?
A. Yes, sir.
Q. Was it connected with the vertical cross-brace in any way?
A. No, sir; that is, only so far as this set on the top. That is, the vertical cross-brace was just used to stiffen the frame. That is all it is used for.
Q. Was there any other way in use at that time of mounting the treadle than by means of these cones and set-screws than were shown here in this last model?
A. There were also knife-edge bearings.
Q. How were those knife-edge bearings located?
A. On the tie-rod—on this part of the tie-rod, I call it.
Q. They were not connected, then, with the vertical cross-brace?
A. No, sir.

Q. What does this model represent that I now hand you?

74 A. This represents the knife-edge bearings upon the tie-rod.

Q. These two loops or devices that appear on top of the rod, what are they?
A. Those are the bearings, for the treadle.
Q. And the treadle would work in those, would it?
A. Work in those; yes, sir.
Q. And in that way the treadle was mounted on the rod, was it?
A. Mounted on the rod; yes, sir.
Q. And this rod connected the two legs of the machine?

A. Yes, sir.

Q. And had no connection with the brace?

A. No, sir.

Q. What was the effect of that construction?

A. The bearings would work loose in the side of the legs and turn over.

Q. Then this would not stay in alignment?

A. This would not stay in line; they would work out of line, never in line—they would work loose from the screws that held them to the bar.

Mr. MILLER: We offer this model in evidence, and ask that it be marked Plaintiff's Exhibit "F."

(The model referred to was here introduced in evidence and marked Plaintiff's Exhibit "F.")

Q. In this construction was there any difficulty in keeping the parts in perfect alignment?

A. There was more difficulty in that direction than anything about a sewing machine—gave me more trouble than anything else.

Q. Was that difficulty common to all the sewing machines you knew of at that time?.

A. It was.

75 Q. What did you conclude from this knowledge that you obtained of the defect in prior machines, and what did you do to remedy it?

A. I concluded that if I could overcome that, it would be important to me—if I could overcome that. And I experimented on various models, and in June, 1880, the middle of June, I had the thing all built, in perfect models, perfect working models, just as perfect as they are today.

Q. What did you do, and what was the construction which you adopted?

A. I had all these different constructions, and I determined to have that construction embodied in my patent which I considered was preferable and according to my ideas; that is, the one which I considered best, and do consider the best today, and that was knife-edge bearings, because there is less friction to knife-edge bearings than any other bearings, for the alignment in both is alike.

Q. What did you do with regard to the location of the treadle?

A. I put the treadle in the lower end of the vertical double brace.

Q. What was the result of putting the treadle in the vertical double brace instead of in the legs or on the bar or tie-rod?

A. It gave it a stationary and a more uniform motion, and no inexperienced person could get it out of line. There was no way you could get it out of line. It was always in line, as near frictionless and noiseless as it could possibly be.

76 Q. You say in your patent something about cones and set-screws that had been used before that. What were the cones and set-screws referred to by you there?

A. To the old style.
Q. What were the old style? Have you some of them there?
A. Yes, sir; there are some of them.
Q. Are they in this model, Plaintiff's Exhibit "E"?
A. Yes, sir; they are on that.
Q. These cones that you refer to, then, are those things, those conical-shaped things on each side?
A. Yes, sir.
Q. And held in position by a set-screw?
A. Yes, sir.
Q. So that was what you referred to when you said you avoided the use of those?
A. Yes, sir.
Q. Have you got a full-sized machine here, Mr. Cramer, as representing your invention, outside of these models that we have referred to?
A. Yes, sir. That is it (showing).
Q. Is this the machine here?
A. Yes, sir; that is one of the machines.

Mr. MILLER: We offer that machine in evidence, and ask that it be marked Plaintiff's Exhibit "G." That is one that was in evidence in the other case, Mr. Wheaton.
Mr. WHEATON: We object to that, if your honor please, as not representing plaintiff's patent.
The COURT: I have overruled the objection.

77 *Exception One.*

To which ruling of the court the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.
(The machine referred to was here introduced in evidence and marked Plaintiff's Exhibit "G.")

Mr. MILLER:

Q. Mr. Cramer, after you got up your invention, what did you do with regard to putting it into use and selling machines containing the same?
A. I had them manufactured, put them into machines, and I have sold the machines for five dollars more than I would, an advance of five dollars on the patent treadle.
Q. When did you first commence selling the machine with the invention in it?
A. In 1881, the first one I had cast. That was cast, you know, at the foundry in, say, January, 1881.
Q. What foundry did you have the first one cast at?
A. At Sonora.
Q. In the foundry at Sonora?
A. Yes, sir.

Q. What did you do with that machine after you had it finished?

A. I put the casting onto the machine shortly afterwards, or put it onto a second-hand machine, and sold it for—well, I sold that for a big price; I got $50 for it.

Q. Who did you sell that machine to?

A. That machine, I think, Mr. Anderson bought—I am not sure—either Mr. Anderson bought it or it went to Australia, an Englishman bought one, and it was either one of the two of them.

78 Q. You sold it at Sonora, did you?

A. At Sonora; yes, sir.

Q. How did the machine operate?

A. First class.

Q. Did it give satisfaction?

A. Oh, yes.

Q. Did you have any more cast at that foundry?

A. Yes, sir; I had more cast at that foundry. I think there were three shortly afterwards in succession—shortly afterwards. Sometimes I did not cast any for a month, and sometimes not for two months, and sometimes it was every week. It was very irregular.

Q. Did you sell those machines you had cast then?

A. I did.

Q. Where else did you have those parts manufactured afterwards?

A. In 1883 I came to San Francisco, and I had between 35 and 40 manufactured at the O. K. foundry.

Q. Where was the O. K. foundry?

A. It was, as I remember—I know it was on Main street, but the foundry has gone out of existence since then, but the proprietor, the man who did the casting or the molding is now the owner of a foundry.

Q. Which other foundry, if you remember?

A. The Enterprise foundry, corner of Main and Mission.

Q. Is that Mr. Martin?

A. That is Mr. Martin.

Q. Mr. Henry Martin?

A. Mr. Henry Martin.

Q. He manufactured those parts at that time for you, did he?

A. Yes, sir.

Q. Some thirty or forty of them.

A. Yes, sir.

79 Q. What parts did he manufacture then? What were the parts?

A. This part here——

Q. (Interrupting.) Just state what parts, Mr. Cramer.

A. The treadle and the brace.

Q. You got the other parts of the machine somewhere else, did you?

A. Yes, sir.

Q. Where did you get the other parts of the machine?

A. From the American Sewing Machine Company.

Q. What parts did you get from the American Sewing Machine Company?

A. I got the whole parts—I got the whole machine, and then omitted their parts and put in the patented parts instead of them.

Q. That is, after you got the American machines, you took them apart and discarded the parts——

A. (Interrupting.) They came apart—they came knocked down; that is, I ordered them that way.

Q. And when you got them, you discarded the brace and put in your brace and treadle, did you.

A. Yes, sir.

Q. And sold the machines with your brace and treadle in them?

A. Yes, sir.

Q. And this brace which you had manufactured, the brace and treadle that were manufactured for you were manufactured down here in this foundry, you say?

A. Yes, sir.

Q. Where did you carry on that business?

A. In Sonora.

Q. Did you have a store or shop, or anything of that kind?

80 A. Well, I had a workshop in the front room, that I kept machines in.

Q. In what way did you sell machines then?

A. I advertised in the papers, and I also first hauled a machine—well, the first two machines I ever took out, I took out in a wheelbarrow.

Q. Where did you take those two?

A. To Sonora.

Q. After that you took them out with a team, did you?

A. Then I hired a wagon, and finally I found a man who wanted a machine, and traded machines for it, and then for an No. 1 horse. I traded machines for both the horse and wagon, and by and by I had two wagons.

Q. And you carried those machines around with the two wagons, did you?

A. We only used just one at a time. There would always be something the matter with either one or the other, and if anything was the matter with one, we used the other. I very seldom used two wagons.

Q. Where did you carry those machines to?

A. All over the country, Mariposa county, Yosemite valley, Stanislaus county, San Joaquin county, and Calaveras county.

Q. You carried them around in this wagon and sold them where you could, did you?

A. Yes, sir.

Q. Was any one assisting you in that business?

A. The whole family was assisting me.

Q. Who did the family consist of?

A. A son, two daughters and my wife.

Q. What did your son do to assist you?

81 A. He was with me on the wagon, and I would ask him to try and see whether that lady wanted a sewing machine, and he would do it.

Q. What did the others do to assist you?

A. They put the backs in order, and wiped off the covers, put on the knobs, and perhaps lined the bottom with paper, and so on, and got the cloth ready—that is, the cloth for the expert work.

Q. During what years were you engaged in that business?

A. Well, from about 1875——

Q. (Interrupting.) No, no. I mean from the time that you commenced to sell your patented machine, the machine with your patent in.

A. That commenced in 1881.

Q. And how long did you continue that?

—. ——.

Q. About when was that?

A. About 1885.

Q. What kind of a business did you build up during those years?

A. Well, I built up a big business.

Q. Can you give any idea to the jury about what the extent of it was?

A. Well, there was some days I sold two or three machines. I was clearing on an average of $200 a month.

Q. Now, Mr. Cramer, regarding the prices at which you sold your machines, did you get any additional price by reason of having your improvements on the machine, over the old machine?

A. I got $5 more; I charged $5 more.

Mr. WHEATON: I submit that that is not proper testimony, if your honor please. I suppose he is getting at the question of damages now.

82 Mr. MILLER: It goes to show the market value of his invention.

The COURT: The objection is overruled.

Exception Two.

To which ruling of the court the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Mr. MILLER:

Q. Mr. Cramer, do you remember at what price you sold those machines?

A. Yes, sir. Some machines I sold at different prices from others. I sold them all the way from $65 to $90, and several of them up to $100.

Q. What prices did you have to pay to the O. K. foundry for casting those parts?

A. They cost me a dollar and a half, all told; that is, the castings and the painting all together, cost me $1.50.

Q. What was your method of business with the O. K. foundry in reference to ordering those parts and paying for them?

A. I do not know as I understand.

Q. When you wanted to get these parts from the O. K. foundry, what was your method of doing business with them? Did you come down here yourself and get them?

A. At this one time I was down here myself.

Q. That is, when you made arrangements with them to manufacture it?

A. Yes, sir; when I got this one cast, I was personally there at the foundry.

83 Q. After that when you went back home, when you wanted these parts, what did you do?

A. Well, I could order them.

Q. You ordered them by letter, did you?

A. Oh, yes, sir.

Q. What was the method pursued by you in paying for them?

A. My rule in paying for all these things was always, as soon as I got the bill, I sent the money with the bill, and they would receipt the bill, and that would be my return receipt, so there would be no mistake. I would say, "I herewith send you the money that the bill calls for. Please receipt. Here is your money."

Q. You were engaged in carrying on that business in that general way, you say, through those counties that you have mentioned, from 1881 to about 1885?

A. That is, we sold machines——

Q. (Interrupting.) With your patented device on, I mean.

A. Longer than that?

Q. With your patent in them?

A. In 1885. You see I went into the busines earlier, and sold machines all along. You see, I did not have the patent in 1875 or 1876.

Q. I know that. I say, you commenced selling your patent in 1881, did you?

A. Yes, sir.

Q. And you continued to manufacture them until some time in 1885, when you stopped?

A. Yes, sir, that is right.

Q. What satisfaction did those machines containing your invention give to the people who bought them?

A. Absolute satisfaction.

84 Q. How did they operate with regard to overcoming the difficulty which had been existing in the prior machines?

A. They gave greater uniformity of motion, and made the machine run a great deal lighter.

Q. Did you ever have any trouble in having to go around and readjust them, or put them in alignment again?

A. No, sir. There is nothing to be done in that line at all.

Q. Did you have any correspondence, in those early days, with the Singer Manufacturing Company.

A. I did.

Q. Do you remember when that was?

A. If I mistake not, it was on the 7th day of February, 1883. I am not positive of the date, but I think that is the date—somewhere along there.

Q. You wrote them a letter?

A. I did.

Q. Did you keep a copy of that letter?

A. I did.

Q. Is this a copy of the letter that you wrote and sent them? (Handing.)

A. (After examining.) I think so. I will read it over. (Reads letter.) Yes, sir, that is a copy.

Q. You have had that ever since, have you?

A. Yes, sir.

Q. In whose handwriting is this letter?

A. This, I think, is my youngest daughter's writing. I am not positive. It is by one of my daughters.

Q. Is that a correct copy of the letter that you sent to them?

A. Yes, sir.

85 Mr. OFFIELD: Is that the same letter that has been in evidence before?

Mr. MILLER: Yes, sir. There is an exhibit mark on it. We offer this letter in evidence now, if your honor please, and ask that it be marked Plaintiff's Exhibit "H."

(The letter referred to was here introduced in evidence and marked Plaintiff's Exhibit "H," the following being a copy thereof:)

PLAINTIFF'S EXHIBIT "H."

"SONORA, CAL., *Feb.* 8, '83.

"The Singer Mfg. Co.

"DEAR SIRS: Having invented one of the most improved sewing-machine treadles, I desire to call your attention to its merits. To make your machine the most complete of any sewing-machine in the market, I think you should embody my improvement in your machine.

"My patent treadle consists of a brace and treadle working in combination with each other. Is frictionless as can be, noiseless, self-adjusting, always in line, most cheap, never needs readjusting, does away with cones and set-screws and makes the machine run a great deal lighter. I desire to sell my patent reserving the right to put them on all machines I sell or to have you put them on your machines and give me a royalty.

"Yours truly,

H. CRAMER,

"*Sonora, Tuolumne Co., Cal.*"

The WITNESS: I think the bottom of the letter tells who wrote it, which of the daughters.

86 Mr. MILLER: That is immaterial.

Q. Mr. Cramer, did you receive any answer from the Singer Sewing Machine Company?
A. I did.
Q. Is this the letter which you received as an answer from them?
A. (After examining letter.) Yes, sir, that is the answer.
Q. You received that through the United States mail, did you?
A. I did, sir.

Mr. MILLER: This is the same letter as was offered in evidence in the other case as Exhibit "E," gentlemen. I offer it in evidence now, to be marked as Plaintiff's Exhibit "I."

(The letter referred to was here introduced in evidence and marked Plaintiff's Exhibit "I," the following being a copy thereof:)

PLAINTIFF'S EXHIBIT "I."

"Office of the Singer Manufacturing Company, No 34 Union square.

"NEW YORK, *Feb'y 20th*, 1883.

"Mr. H. Cramer.

"DEAR SIR: Replying to yours of 8th inst. would say that we receive copies of all the sewing-machine patents as they issue. As soon as yours is out, if after examination, we find anything of value in it that we care to adopt, we will communicate with you farther on the subject.

"Yours truly, THE SINGER MFG. CO.
"W. F. PROCTOR, *V. Pres.*"

87 Q. After receiving that letter, Mr. Cramer, and after your patent came out——
A. (Interrupting.) The patent was out already.
Q. The patent was out on January 30, 1883, was it?
A. Yes, sir.
Q. After receiving this letter from the Singer Manufacturing Company, did you hear from them again in regard to your patent?
A. No, sir.
Q. What was the next thing you noticed in the sewing-machine art with regard to this matter?
A. The next I saw the advertisement in the "Sewing Machine Advance" of 1884.

Mr. MILLER:

Q. You noticed some advertisement of theirs in the "Sewing Machine Advance"?
A. The "Sewing Machine Advance" of 1884.
Q. Is this a copy of the "Sewing Machine Advance" which you refer to?
A. (After examining paper.) Yes, sir, that is the one.
Q. What was the advertisement you refer to there?
A. The claims—the whole of it.
Q. Do you mean this part on page 257, headed "Tuesday, October 15, 1884. No. 306,469," and so on. Is that what you refer to?

A. Yes, sir, that is what I refer to, called the Diehl patent.
Q. That is a cut of the Diehl patent, is it?
A. Yes, sir.
Q. What connection did the Singer Manufacturing Company appear to have with the advertisement which you saw in the
88 "Sewing Machine Advance," which induced you to write anything to them, or to take the matter up? What was the connection of the Singer Manufacturing Company with it?
A. Diehl was their mechanical expert, and they hung the treadle in the double vertical brace.
Q. I do not mean the mechanical part of the device, but you say you saw an advertisement in the "Sewing Machine Advance"?
A. Yes, sir.
Q. Which you thought interfered with your patent?
A. Yes, sir.
Q. Did that advertisement relate to the Singer Manufacturing Company in any way?
A. I think so.

Mr. WHEATON: I ask to have the last two or three questions and answers read.
(Testimony read.)
Mr. WHEATON: I object to the statement of the witness where he used the expression, or rather, where Mr. Miller in his question used the expression, "which you thought interfered with your patent."
The COURT: I overrule the objection.

Exception Three.

To which ruling of the court the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Mr. MILLER:

Q. Mr. Cramer, after seeing this advertisement of the Singer Manufacturing Company, what did you do in regard to the matter?
89 A. I notified the Singer Manufacturing Company——
Q. (Interrupting.) Do not give the contents of the letter. Just state what you did. Did you write to them?
A. I did.
Q. By registered letter?
A. By registered letter.
Q. Is this a copy of the letter which you sent, together with the post-office receipt showing that the letter was sent by registered mail?
A. Yes, sir, that is it.
Q. You sent the letter, did you?
A. Yes, sir, I sent the letter.

Q. And you received this card from the post-office, did you?

A. Yes, sir.

Q. Did the card come back to you showing that the letter had been received?

A. Yes, sir.

Mr. MILLER: We offer this letter in evidence, if your honor please, and we ask that it be marked Plaintiff's Exhibit "J."

(The letter referred to was here introduced in evidence and marked Plaintiff's Exhibit "J," the following being a copy thereof:)

PLAINTIFF'S EXHIBIT "J."

"SONORA, *Sept.* 25, 1885.

"The Singer Manufacturing Co.

"DEAR SIRS: Please take notice that your patent No. 306,469 is an infringement on my patent No. 271,426, and I shall hold the Singer Company responsible for damages. The fly-wheel on brace is also my invention.

90 "I would like to sell you my patent No. 271,426, reserving the privilege of using the treadle on all machines I sell. Please let me hear from you by return mail.

"Yours truly, H. CRAMER,

"*Sonora, Tuolumne County, Cal.*,

"Per M. C. CRAMER."

Mr. MILLER:

Q. Mr. Cramer, did you receive any answer from this letter from them?

A. It is a registered letter, and I received the answer that he received it.

Q. The post-office receipt shows that it was received by the Singer Manufacturing Company?

A. Yes, sir, that is it.

Q. It is so, is it not?

A. Yes, sir.

Q. But I mean, did the Singer Manufacturing Company write to you in answer to that letter?

A. No, sir.

Q. Did they take any notice of it at all, as far as you were concerned?

A. No, sir, no notice at all.

Q. And that was the end of the matter so far as the correspondence was concerned?

A. That was the end of the matter so far as the correspondence was concerned.

Q. After you saw this advertisement you have referred to in the "Sewing Machine Advance" in 1884, did the style of the machine which you there saw delineated, make its appearance in Tuolumne county?

A. It did.

Q. About when?

A. About 1885.

91 Q. Who was selling those machines, what company?

A. The Singer Company.

Q. They had agents up there, did they?

A. They had agents running through different sections there, from Stockton and different headquarters, and run with their wagons through the country.

Q. That is, they had several agents that way, I presume, did they?

A. I don't know how many they had, or who they all were, but I saw the machines.

Q. You saw the machines throughout that section of the country?

A. Yes, sir.

Q. Being sold?

A. Yes, sir.

Q. Do you know what is the construction or the mode of construction of those machines that the Singer Company were selling and which you claim to be an infringement of your patent?

A. Yes, sir.

Q. What are those machines generally styled, or what are they generally called?

A. They call them the Diehl machines, or the Singer machines. People in general call them the Singer machines. They do not know the name of them, do not know them as the Diehl machine.

Q. But the special device, I understand, was gotten up by this man Diehl?

A. Yes, sir.

Q. Did the Singer Company ever advertise its machines for sale in catalogues—the Diehl machines?

A. Yes, sir.

Q. You have seen those catalogues, have you?

A. Yes, sir.

92 Q. And gotten them?

A. Yes, sir.

Q. I show you a catalogue of the Singer Manufacturing Company which was offered in evidence in the other case as Plaintiff's Exhibit "F," and ask you if that is the catalogue you refer to, issued by the Singer Manufacturing Company?

A. This is an instruction book.

Q. It was issued by the Singer Manufacturing Company?

A. And also a catalogue—issued by the Singer Manufacturing Company, yes, sir.

Q. Look on page 7 of that catalogue.

A. To be precise, it is not presumable that any other company would issue those circulars.

Q. Never mind that. Look on page 7, and state what that picture represents.

A. (After examination.) That represents the Diehl patent.

Q. Was that the style of machine you were talking about in this correspondence?

1831

See Page 7. for
Pltff's Ex. E. in ii 80 h.

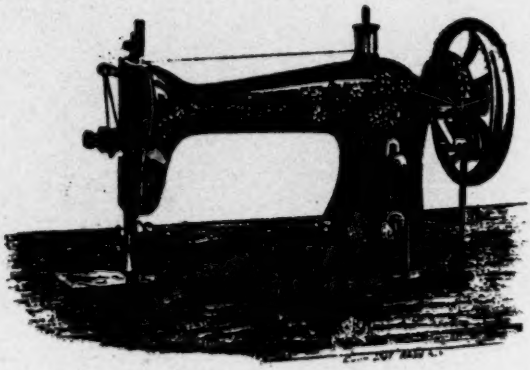
12259. mm. 29.90
Pltff's Ex. K.
See p. 7.

The SINGER Manufacturing Company's Sewing Machines.

1889.

U. S. Circuit Court, N. Dist. of Cal.
Hannah Grainer
vs. } No. 2260
Singer Mfg Co.
Complainant's Exhibit F.
E.M.H. Examiner.

1832



IMPROVED FAMILY MACHINE.

(OSCILLATING SHUTTLE).

We claim for this machine a scientific and mechanical excellence never before attained in any machine constructed for family sewing.

It can be relied upon at all times to do any kind of family work.

It does perfect work on all the various thicknesses of goods used in family sewing, without readjustment of tension.

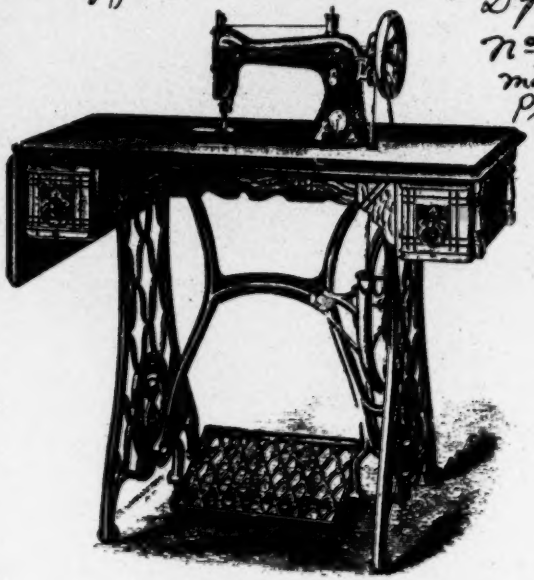
It does a greater variety of work than any other sewing machine.

It is supplied with the best attachments for tucking, hemming, binding, quilting, braiding and ruffling, and is mounted in the various styles shown in the following pages.

1833

Page 7.

FOR FAMILY USE. 7



IMPROVED FAMILY MACHINE.

3-DRAWER DROP LEAF TABLE, FOR COVER.

Above cut shows the I. F. Machine mounted on a simple and elegant form of cabinet work, which is very popular with those who require a machine for daily use.

It also shows the new (patented) and light running stand, upon which all our family machines are mounted, with band wheel and treadle entirely supported within the brace, ensuring accurate adjustment and ease of operation; also our new automatic belt-shifter, and other improvements.

A. That is the style of machine they introduced up there.

Q. And is that the style of machine which they put upon the market in Tuolumne county?

A. Yes, sir, that was the style. That is, I would like to say one thing. You know they have vibrating and oscillating ma-

93 chines, the head, you know, but the bottom of it is all alike; there is no difference in the bottom.

Q. I am referring to the bottom of it.

A. Yes, sir.

Mr. MILLER: We offer this in evidence, and ask that it be marked Plaintiff's Exhibit "K."

(The catalogue referred to was here introduced in evidence and marked Plaintiff's Exhibit "K," the following being photographic copies of the front cover and pages 6 and 7 of said catalogue.)

(Here follow photographs marked pp. 94, 95, & 96.)

97 Afternoon session.

MARCH 29.

Direct examination of HERMAN CRAMER resumed:

Mr. MILLER: Just before the adjournment, may it please the court and gentlemen of the jury, we had offered in evidence Plaintiff's Exhibit "K," this catalogue of the Singer Manufacturing Company. I desire to read to the jury the parts of it that we rely on. It is entitled, "The Singer Manufacturing Company's sewing machines, 1889." Commencing on page 5 is a description of the machines, and it says: "For many years we have supplied a majority of the sewing machines used in families throughout the civilized world. We are constantly making improvements in our machines, and from time to time introducing novelties, not only in machines, but in all that pertains to them.

"On pages 6 to 17 inclusive, we have illustrated our latest family machines, our improved stand, and our various styles of cabinet-work, to all of which we invite the attention of purchasers. The machines are easy to run, convenient to operate, durable and fill all the latest requirements for every variety of family sewing.

"The stand is fitted with adjustable cone bearings throughout, admitting of close adjustment and reducing friction to a minimum. These bearings being entirely within the brace, the adjustment is not affected by any strain which may be put upon the stand.

"Our machines are supplied with the best attachments, and are mounted in a variety of styles of cabinet-work, in walnut, antique oak, etc., giving a large assortment from which to make a selection."

98 Then on pages 6 and 7 are cuts of the machine, headed, "Improved Family machine." And there is this language: "Oscillating shuttle. We claim for this machine a scientific and mechanical excellence never before attained in any machine constructed for family sewing."

And then on page 7: "Above cut shows that I. F. machine

mounted on a simple and elegant form of cabinet-work, which is very popular with those who require a machine for daily use. It also shows the new (patented) and light-running stand, upon which all our family machines are mounted, with band wheel and treadle entirely supported within the brace, ensuring accurate adjustment and ease of operation; also our new automatic belt-shifter, and other improvements."

I will hand this to the gentlemen of the jury, so they can see the cut of the machine itself.

Q. Mr. Cramer, I hand you another catalogue of the Singer Manufacturing Company, entitled "Directions for using the Family Singer sewing machine. The Singer Manufacturing Company. Principal office, 34 Union square, New York, 1885," and ask you if that is one of the catalogues of the Singer Manufacturing Company which you found being distributed upon the market from time to time?

A. Yes, sir, that is one of them.

Q. State whether or not the machine that is on page 24 represents the form of construction of this machine which you claim to be an infringement of your patent?

A. That is the form of construction of the machine which I claim is an infringement on my patent.

99 Mr. MILLER: We offer this catalogue in evidence, if your honor please, and ask that it be marked Plaintiff's Exhibit "L." This has a cut also, the same as the other exhibit, except that it has not the top part of it nor the legs, and it has got the brace and the treadle, and therefore illustrates the matter a little more thoroughly, everything else being eliminated except what we claim, the brace and treadle. On page 24 there is this language:

"The new Singer stand brace (with belt thrown off). Patented. The above figure shows our new stand brace, with dress guard and belt-shifter, fully covered by patents.

"The balance-wheel and treadle have their bearings entirely independent of the stand or legs, thereby assuring a correct adjustment and easy action. This device presents the 'building' which so often follows a slight displacement of the supports of the machine, a difficulty rarely appreciated, except by a skilled mechanic, which hitherto it has been considered impossible to remedy. This distinctive feature of the Singer machine is of great importance to the health and comfort of the operator. The balance-wheel and treadle also work upon adjustable centers, by means of which the friction is reduced to a minimum, while lost motion can be readily taken up. These devices render the New Singer stand the lightest-running of any sewing-machine motion ever constructed.

I will also hand that to you, gentlemen of the jury, so that you can examine it, and ask that it be marked Plaintiff's Exhibit "L."

(The catalogue referred to was here introduced in evidence and marked Plaintiff's Exhibit "L," the following being photographic copies of the front cover and pages 3 and 24 thereof:)

(Here follow photographs marked pp. 100, 101 & 102.)

1835

100

DIRECTIONS

12259
Pltf's. Exhibit
L. W.P.B. Dep. Clerk. Mar. 29, 1900

FOR USING THE

IMPROVED FAMILY

SINGER SEWING MACHINE.

The Singer Manufacturing Co.

PRINCIPAL OFFICE,

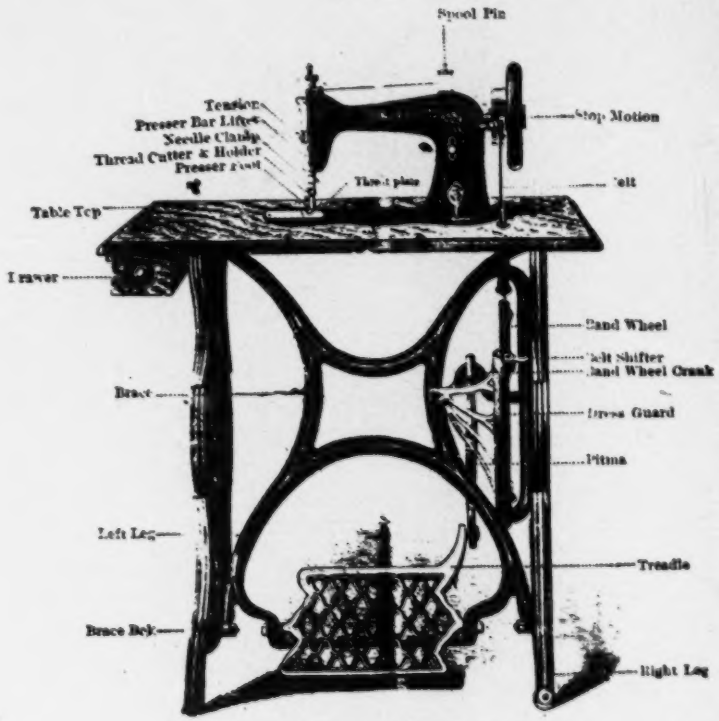
34 UNION SQUARE,

NEW YORK.

1885.

THE IMPROVED FAMILY SINGER.

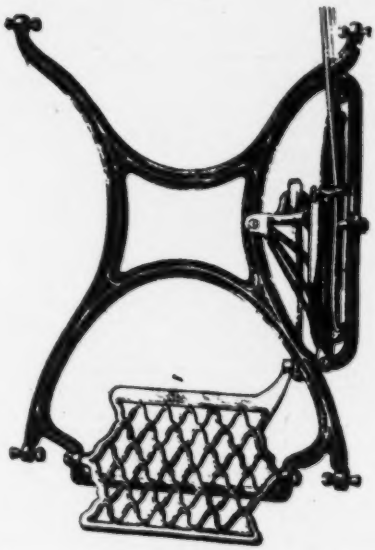
FIG. 2.



IMPROVED FAMILY MACHINE, WITH STAND.

1837
102

FIG. 8.



THE NEW SINGER STAND-BRACE (WITH BELT THROWN OFF).

Patented.

The above figure shows our New Stand Brace, with dress guard and belt shifter, fully covered by patents.

The balance-wheel and treadle have their bearings entirely independent of the stand (or legs), thereby assuring a correct adjustment and easy action. This device prevents the "building" which so often follows a slight displacement of the supports of the Machine, a difficulty rarely appreciated, except by a skilled mechanic, which hitherto it has been considered impossible to remedy. This distinctive feature of the Singer Machine is of great importance to the health and comfort of the operator. The balance-wheel and treadle also work upon adjustable centres, by means of which the friction is reduced to a minimum, while lost motion can be readily taken up. These devices render the New Singer stand the lightest-running of any sewing machine motion ever constructed.

1838

See page 15
No. 22-59
Pat. Exhibit
Mar 30
19

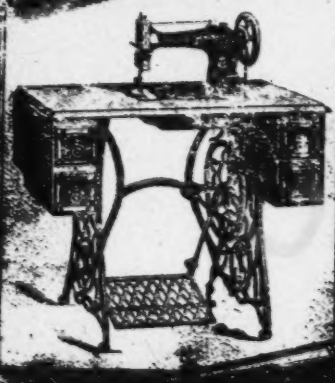
FORM 7133.
October 10, 1891.
Reissue.
Supersedes Form 7004.

...IONS

...IE

...TLE No. 2,

...SIN MACHINE



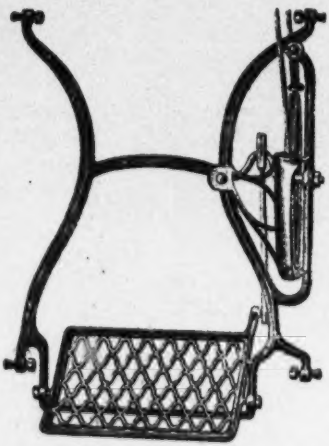
Treating Guide

...SIN MACHINE

1839

Fig. 21 & description within lines marked Pltff's Ex. H° in Nº 11808, WBB Dep clk.

FIG. 21.



THE NEW SINGER STAND BRACE (WITH BELT THROWN OFF).—*Patenkd.*

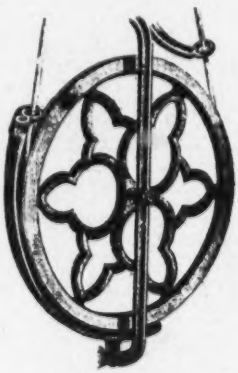
FIG. 21 shows our Stand Brace, carrying the entire driving mechanism.

Both the band-wheel and treadle work upon adjustable centres, which admit of accurate adjustment with a minimum amount of friction.

This distinctive feature renders ours the lightest running of any sewing machine stand yet constructed, and is a matter of great importance to the health and comfort of the operator.

This invention simplifies and makes easy the often-irritating task of throwing off and replacing the belt. To throw off the belt, press the small lever at the top of the dress guard to the left with the forefinger, keeping up the motion of the treadle meanwhile. To put on the belt, allow the lever to spring back in its p[illegible] and operate the treadle as in sewing (with the wheel turning toward you), when a single revolution of the wheel will bring the belt back in place.

FIG. 22.



THE NEW SINGER BELT SHIFTER.
Patented.

103 Q. Mr. Cramer, here is another catalogue entitled "Directions for using the Singer Manufacturing Company's vibrating shuttle No. 2 sewing machine." It is dated 1891, and I call your attention to page 15 of that exhibit, and ask you if that cut on that page represents the style of machine that we have heretofore been referring to, which you claim to be an infringement?

A. Yes, sir, it is. That represents the style of machine that I claim to be an infringement.

Q. Did you find these catalogues of the Singer Manufacturing Company on the market and distributed?

A. Yes, sir.

Q. And you procured this one?

A. Yes, sir.

Mr. MILLER: I offer this catalogue in evidence, and ask that it be marked Plaintiff's Exhibit "M."

(The catalogue referred to was here introduced in evidence and marked Plaintiff's Exhibit "M," the following being photographic copies of the front cover and page 15 thereof:)

(Here follow photographs marked pp. 104 & 104*a*.)

105 Mr. MILLER: On page 15, there is this language:

"Figure 21 shows our stand brace, carrying the entire driving mechanism. Both the band wheel and treadle work upon adjustable centers, which admit of accurate adjustment with a minimum amount of friction. This distinctive feature renders ours the lightest running of any sewing-machine stand yet constructed, and is a matter of great importance to the health and comfort of the operator."

It is substantially the same as the other, except that it is printed in a different year.

Q. Mr. Cramer, I hand you two circulars printed in white and blue, entitled "Price-list of the Singer Family sewing machines, 32 Post street, San Francisco, Cal.," as to one, and the other with the same title, except the number, "510 Thirteenth street, Oakland," and ask you if you recognize those as advertising circulars on the market by the Singer Manufacturing Company?

A. Yes, sir. Those are circulars of the Singer Manufacturing Company; at least, they were handed to me in the Singer establishment in San Francisco and Oakland. I asked for circulars and they handed me these.

106 Q. Do those represent any machines which you claim also to be an infringement of your device?

A. Yes, sir. All of them excepting the cabinet machine. This cabinet machine does not show a center brace at all.

Q. The cabinet machine is without a brace, as shown.

A. The cabinet machine does not show a brace. All the rest of them do.

Q. Omitting that one, they all show the same device as the catalogues?

A. The same device as is shown in the catalogues, precisely.

Mr. MILLER: We offer these in evidence, and ask that they be marked, the one with the San Francisco address Plaintiff's Exhibit "N," and the one with the Oakland address as Plaintiff's Exhibit "O."

(The circulars referred to were here introduced in evidence and marked Plaintiff's Exhibit "N" and Plaintiff's Exhibit "O," the following being photographic copies thereof:)

(Here follow photographs marked pp. 107, 108, 109, & 110.)

111 Q. What does this device which I now hand you represent, does it represent the device which you are contending is an infringement of your patent?

A. It does.

Q. This is simply a brace and treadle and band wheel and pitman construction?

A. Yes, sir, that is all.

Q. Just explain to the jury the operation and construction of this device.

A. This treadle is hung in the lower part of the vertical double brace, and held by two trunnions with holes in the treadle, and with two holes in the brace that are stopped up by the trunnions, and the holes put in the treadle to receive the trunnions from off the vertical brace.

Q. You find a little turndown at each end of the vertical brace, do you not?

A. Yes, sir.

Q. And the treadle bearings are mounted in the ends of those little projections or turns, are they?

A. Those downward turns, yes, sir.

Q. What kind of bearings are they in those machines?

A. I have not taken them out, but I am positive that they are point-center bearings.

Q. The point-center bearings are the style the Singer Manufacturing Company uses in its machines, are they?

A. Yes, sir.

Q. They screwing from the outside?

A. They screwing from the outside into the holes of the treadle.

Q. Then there is a hole in the projection of the treadle in which the band wheel band works?

A. In which the pointed bolts or pointed trunnions work.

112 The COURT:

Q. Is the trunnion you speak of there on the diagonal brace, or the treadle?

A. The trunnions are the bolts that make the bearing for the treadle.

Q. Are they fastened to the brace?

A. By reason of the bolt and the set-nut.

Protection to Purchasers.

SINGERS
LEAD THE WORLD.

(Over 13,000,000 Made and Sold.)

HIGHEST AWARDS
AT THE
World's Columbian Exposition
FOR

Excellence of Design,
Excellence of Construction,
Regularity of Motion,
Ease of Motion,
Great Speed,
Adjustability,
Durability,
Ease of Learning,
Convenience of Arrangement.

IF YOU BUY A SINGER,

You will receive careful instruction from a competent teacher at your home.

You can obtain necessary accessories direct from the Company's offices.

You will get prompt attention in any part of the world, as our offices are everywhere; and we give careful attention to all customers, no matter where their machines may have been purchased.

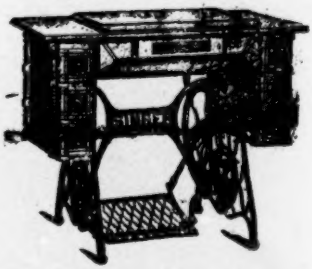
You will be dealing with the leading Company in the sewing-machine business, having an unequaled experience and an unrivaled reputation—the strongest guarantee of excellence.

SOLD ON EASY PAYMENTS.

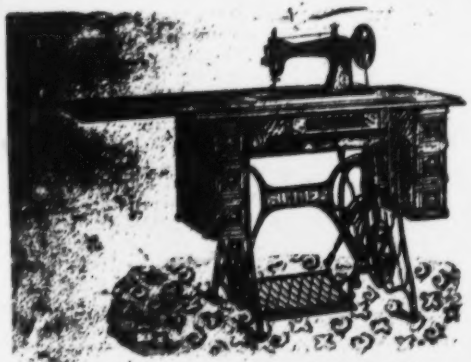
The Singer Cabinet Table.

(Closed.)

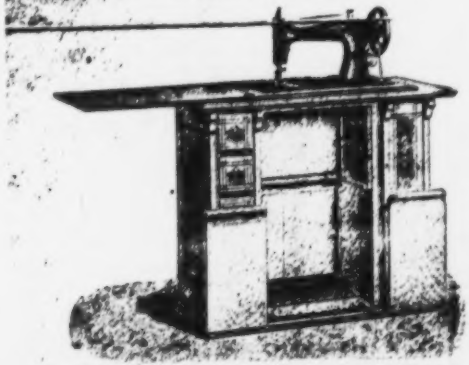
This table is the latest result of the cabinetmaker's art, in the ingenuity of its arrangement and thoroughness of workmanship. In regular, course, it is supplied either in Oak or Walnut, but can be made to order in any kind of wood desired, and finished to match the most ornate furnishings. The machine can be folded down below the table



against a bent-wood shield that fully protects the dress of the operator and the floor from all dropping of oil, lint, etc. The machine is thus thoroughly protected from dust when not in use, and the closed table can be utilized for other purposes. The hinged extension-leaf then covers the machine when down is folded back when it is raised, thus making the table-top measure 60 inches in length by 18 inches in width, and affording ample room for the work.



Machine No. 15, on 7-drawer Cabinet Table.



Drawing-room Cabinet, open, showing machine ready for use.

...PRICE LIST...

—OF—

Singer Sewing-Machines

—FOR—

Family Sewing and Art Needlework.....

TWO DISTINCT TYPES OF LOCK-STITCH MACHINES, MOUNTED ON ANY STYLE OF TABLE, AS FOLLOWS:

MACHINE No. 27,

Vibratory Shuttle,

IN WALNUT OR ANTIQUE OAK.

Seven-drawer Extension-leaf Table, with Cover, . . .	$70.00
Five-drawer Extension-leaf Table, with Cover, . . .	65.00
Seven-drawer Extension-leaf Cabinet Table, ...	75.00
Five-drawer Extension-leaf Cabinet Table, ...	70.00
Drawing-room Cabinet, ...	95.00

A Complete Set of Attachments with every machine.

SOLD ON EASY PAYMENTS. LIBERAL DISCOUNT FOR CASH.

MACHINE No. 15,

Oscillating Shuttle,

IN WALNUT OR ANTIQUE OAK.

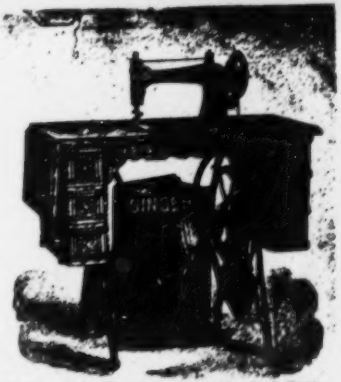
Seven-drawer Extension-leaf Table, with Cover, . . .	$70.00
Five-drawer Extension-leaf Table, with Cover, . . .	65.00
Seven-drawer Extension-leaf Cabinet Table, ...	75.00
Five-drawer Extension-leaf Cabinet Table, ...	70.00
Drawing-room Cabinet, ...	95.00

A Complete Set of Attachments with every machine.

SOLD ON EASY PAYMENTS. LIBERAL DISCOUNT FOR CASH.

THE SINGER MANUFACTURING COMPANY.

SELLING DIRECTLY TO CONSUMERS.



Machine No. 27, on 7-drawer Ex.-leaf Table.

Machine No. 15, on 8-drawer Ex.-leaf Table.

1042

108

SINGERS
LEAD THE WORLD.

HIGHEST AWARDS
at the
World's Columbian Exposition

THERE ARE THREE DISTINCT TYPES OF
SINGERS.

1—Vibrating Shuttle (Lock-stitch).
2—Oscillating Shuttle (Lock-stitch).
3—Singer Automatic (Chain-stitch).

EITHER THE LOCK-STITCH OR CHAIN-STITCH

THE SINGER MANUFACTURING COMPANY.

Protection to Purchasers.

The Singer Cabinet Table.

The Singer
Drawing-Room Cabinet.

Points to Remember:

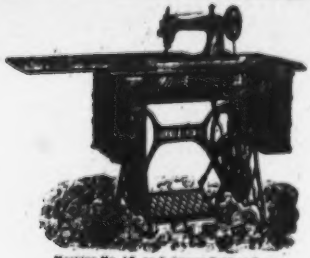
IF YOU BUY A SINGER.

SOLD ON EASY PAYMENTS.

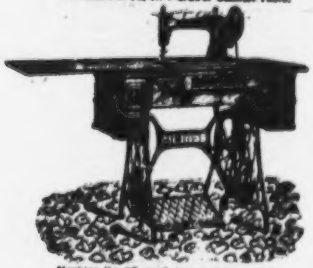
510 THIRTEENTH ST.
OAKLAND, CAL.

1844

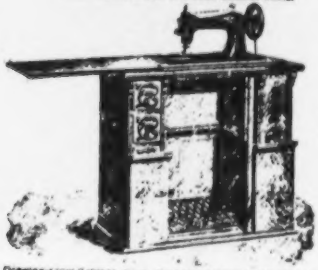
110



Machine No. 18, on 7-drawer Cabinet Table.



Machine No. 27, on 6-drawer Cabinet Table.



Drawing-room Cabinet, open, showing machine ready for use.

SINGER SEWING-MACHINES

—FOR—

Family Sewing, and Art Needlework. . . .

THREE DISTINCT TYPES OF MACHINES, ADJUSTED ON ANY STYLE OF TABLE, IN WALNUT OR ANTIQUE OAK, AS FOLLOWS:

Drawing-room Cabinet.
Cabinet Table, Extension-leaf, Five Drawers.
" " " Seven "
Extension-leaf Table, with Cover, Five Drawers.
" " " Seven "

A Complete Set of Attachments with every machine.

SOLD ON EASY PAYMENTS. LIBERAL DISCOUNT FOR CASH.

SINGER No. 27 (Vibrating Shuttle)

IS a light-running, quiet, easily operated, self-threading, lock-stitch machine, adapted to all varieties of family sewing. Among its latest improvements are the simple Stitch-Regulator, Self-Setting Tension, Automatic Bobbin-Winder, simple Vibrating Shuttle and other Self-acting Parts.

SINGER No. 10 (Oscillating Shuttle)

IS an easily operated, light-running, noiseless, oscillating shuttle, lock-stitch machine, suitable for all grades of family sewing and for light manufacturing purposes. It has lately adopted many valuable mechanical improvements, a short Self-setting Needle, independent Thread-Controller and Stitch-Regulator—a combination which secures the highest rate of speed ever yet obtained in a lock-stitch sewing-machine.

SINGER No. 24 (Automatic Chain-stitch)

IS a simple, silent, swift and easy-running single-thread machine [illegible] for all kinds of light sewing in the home, and is in many instances peculiarly adapted to the use where the needle is threaded.

BUT ONE GRADE OF PRODUCT.

We guarantee the highest grade of product, in design, material and workmanship. Our machines are all made of the best material, upon the most advanced methods, by skilled workmen. Consequently they are more effective, wear longer, and are more easily operated than any other sewing-machine on the market.

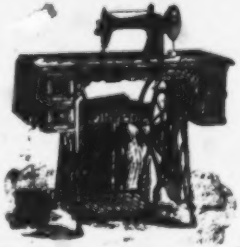
A Complete Set of Attachments with every machine.

SOLD ON EASY PAYMENTS. LIBERAL DISCOUNT FOR CASH.

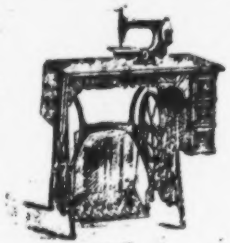
THE SINGER MANUFACTURING COMPANY.

SELLING STRICTLY TO CONSUMERS.

Machine No. 27, on 7-drawer Ex.-leaf Table.



Machine No. 18, on 6-drawer Ex.-leaf Table.



Machine No. 24, on 6-drawer Ex.-leaf Table.

Mr. MILLER:

Q. Have you got some of those trunnions here loose, that we can see?

A. Yes, sir, I have.

Q. Get them, so that this may be explained to the court.

A. Yes, sir. They are not the ones they used in that machine, but they are something like this.

Q. This device which I hold in my hand is what you have been referring to as the point-center bearing, is it?

A. Yes, sir.

Q. It is simply a threaded screw with a pointed end on it?

A. Yes, sir.

Q. And that is screwed through the double brace?

A. Yes, sir.

Q. And then a nut put on the end to hold it there?

A. Yes, sir.

Q. That is, there is a round hole in the treadle, is there?

A. Yes, sir.

Q. In which this fits?

A. Yes, sir.

Q. And then the treadle——

A. Oscillates upon that.

Q. Referring now again to the model of which you spoke a moment ago. I understand you that this conical bolt is put through the lower end of the double brace from the outside, so as to extend to the inside?

113 A. Yes, sir.

Q. And then it fits into a hole in the treadle, does it?

A. Yes, sir.

Q. And the other one on the other side is the same way?

A. Yes, sir.

Q. So in that way you have a treadle mounted on these point-center bearings?

A. Yes, sir, or trunnions, or whatever you are a mind to call them.

Mr. MILLER: We offer this model in evidence, if your honor please.

Mr. WHEATON: It is not a model.

Mr. MILLER: No, it is a full-sized stand of the Singer which they have kindly allowed me to use. I ask that it be marked Plaintiff's Exhibit "P."

(The part of a stand referred to was here introduced in evidence and marked Plaintiff's Exhibit "P.")

Mr. MILLER: I will also offer in evidence the bolt which has been produced by the witness, and ask that it be marked Plaintiff's Exhibit "Q."

(The bolt referred to was here introduced in evidence and marked Plaintiff's Exhibit "Q.")

Q. By reason of this construction, as shown in this stand of the

Singer Manufacturing Company's machine, what advantage is obtained, Mr. Cramer, in the operation of the machine?

A. It gives perfect alignment—the alignment is perfect, and it is more uniform in action, and a more even motion is produced
114 to the whole machine. There is no such thing as putting it out of alignment. There is no way of doing it.

Q. Is that because it is mounted in the diagonal brace?

A. That is because it is mounted in one piece in the double diagonal brace.

Q. How does that compare in construction and mode of operation and result obtained with the device which you put in your machines, which consists of knife-edge bearings?

A. That is the same thing precisely. All that was mounted in the vertical double brace. At least, the only difference is that one has knife-edges and the other point centers—it is a matter of choice.

Q. At the time of your invention, were both point-center and knife-edge bearings old in the art?

A. They were.

Q. You did not invent any bearing, did you?

A. No, sir.

Q. You knew of the point-center bearing?

A. Yes, sir.

Q. And you knew of the knife-edge bearing?

A. Yes, sir.

Q. They were both old?

A. Yes, sir.

Q. You considered, however, that the knife-edge bearings were the preferable form?

A. There were my preference.

Q. You thought they were the best?

A. Yes, sir.

Q. The defendant has substituted for those knife-edge bearings the point-center bearings, I understand?

115 A. They have.

Mr. MILLER:

Q. Is any different result obtained, Mr. Cramer, by using the point-center bearings as shown in the defendant's machine, than what is accomplished in those used by the knife-edge bearings?

A. Not any difference at all.

Q. Is the result accomplished in any different way?

A. One accomplished perfect alignment by the point centers, and the other one by the knife-edge bearings. But the result is just the same.

Q. Is it possible in these constructions to substitute in one machine the point-center bearing for the knife-edge bearing, and *vice versa*, the knife-edge bearing for the point centers?

A. It is.

Q. Have you got a model here illustrating that in one structure where you can put either knife-edge bearings or point centers?

A. Yes, sir, that is the one.

Q. You have here your treadle mounted with the knife-edge bearings?
A. Yes, sir, that has knife-edge bearings.
Q. Mounted in the brace?
A. Mounted in the brace.
Q. Down below here, for the purpose of illustration, you have put these point centers?
A. Point centers, yes, sir.
Q. Do they go through the ends of the diagonal cross-brace?
A. They do.
Q. And extend inward toward the treadle?
A. They do.
Q. You can take this treadle out, can you not, and put a treadle in there to operate on the point centers?
116 A. I can.
Q. Will any different result be produced?
A. No different result; just the same.
Q. Will you please take this treadle out and put in one operating on the point centers.
A. I will. (The witness makes a change in the model.)
Q. Before you insert this new treadle into the model, I will ask you, what is the construction of that, with regard to the treadle itself, and the points in it?
A. That has the trunnions or the point-center bolts in the brace, and the holes in the treadle.
Q. That is, you put the bearing holes in the end of the treadle, do you?
A. Yes, sir.

Mr. MILLER: Just examine that, gentlemen of the jury.

Q. In the other construction, you had the holes in the brace instead of in the treadle, did you?
A. Yes, sir; right the reverse.
Q. You have now reversed it by putting the holes in the treadle?
A. Yes, sir, and the trunnions or conical bolts in the brace.
Q. Now, just put that in your model, and let us see how that works.
A. Yes, sir.
Q. Now, as I understand you, you have taken the treadle out of the bearing holes where the knife-edge were, and you have mounted it down on the point-center bearings?
A. Yes, sir.
Q. And does it accomplish the same result, of keeping the parts in alignment?
117 A. The same result; there is no difference.
Q. Is the treadle still mounted in the diagonal cross-brace now?
A. Yes, sir, it is.
Q. But by the point-center bearings instead of the knife-edge bearings?

A. Yes, sir, but by the point-center bearings instead of the knife-edge bearings. That is all the difference.

Q. Is the model now in substantially the same form as the construction which is shown in the full-size stand in the Singer?

A. Yes, sir, precisely. The ends are wider -part proportionately.

Q. Now coming back for a moment, Mr. Cramer, to the time when you were transacting the business of selling sewing machines in Tuolumne and adjacent counties: What happened to your business after introduction of these Singer Manufacturing Company improved machines into that market?

A. It was quite an improvement on their machines, and they knocked me out; that is, they took the sales I would have made.

Q. What became of your business?

A. It went down to nothing.

Q. In these machines which you made and sold with your invention in them, did you mark on these machines any mark regarding your patent?

A. The word "patented," and the number and date and the name.

Q. You put that on all of them, did you?

A. Yes, sir, all of those that I sold.

118 Q. What was your ability at that time, Mr. Cramer, to supply the market with machines containing your invention?

A. I was in such a fix as to supply the world, almost; that is, I had corresponded with eastern companies about manufacturing it for the wholesale trade, and I had the chance of getting all the models I wanted in San Francisco; my credit was good all over the world, and is today, so far as I know—that is, I can send anywhere all over the world, and bills always come, and I pay as the bills are returned to me; I send the money and state, "Please receipt the bill." That is my mode of doing business. It is quite different from some people, but then, that is my way.

Q. What company were you buying machines from, to which you applied your invention?

A. The American Company.

Q. And where were you getting those machines from, what place?

A. I was getting them from the factory direct, some of them, and then I was buying a good many of them right here in San Francisco.

Q. Was your credit good with them?

A. Yes, sir.

Q. They supplied you with all the machines you ordered, did they?

A. Oh, yes, sir; right along.

Q. Did they ever object to supplying you with any machines?

A. No, sir.

Q. You paid up your bills, did you?

A. Yes, sir. The president remarked when I was in Phil-

119 adelphia that I was the only man that sent the money right straight along.

Q. Where are the American Company's works?

A. In Philadelphia.

Q. But you got most of the machines here in the city, did you?

A. At one time I did, because they could get lower rates to San Francisco, and it was an advantage to me to buy them here, but I did not at any time buy them exclusively at one office.

Q. When this inroad was made upon your business, and it was broken up as you have stated, what course did you pursue then?

A. I tried to get attorneys to stop them, stop their continuing their business in using my device, as I considered it my patent.

Q. Without going into details, you have been in litigation with it ever since?

A. Yes, sir, I have been in litigation, and in correspondence with attorneys about it, ever since.

Q. Did you ever have any dealings, or any proposed dealings, with any of the agents of the Singer Manufacturing Company, with a view to obtaining your invention?

A. Well, yes.

Q. When and where was that?

A. I don't remember, without referring to it, but I think it was in 1891. I am not certain; I have not the record of it here.

Q. What were those communications?

A. Well, this man said he wanted to get the patent——

120 Q. (Interrupting.) Never mind what he said. I don't care for what he said. But was he the agent of the Singer Manufacturing Company?

A. So he represented himself to be.

Q. Was he in that county up there?

A. In that county.

Q. Tuolumne county?

A. Tuolumne county.

Q. Representing *itself* as the agent of the company?

A. He did.

Mr. MILLER:

Q. Did you ever have any dealings with the attorneys of the Singer Manufacturing Company, regarding this matter?

A. Yes, sir.

Q. Which attorneys?

A. Mr. Kalloch.

Q. With any others?

A. Yes, sir.

Q. With whom?

A. Mr. Wheaton.

Q. When and where was that?

A. Mr. Kalloch introduced me to Mr. Wheaton at the City hotel one time and he says, "This is the gentleman whose patent the Singer Company is infringing."

Q. Where was that?

A. That was at the City hotel, in Sonora.

Q. Did they look at your machine at that time?

A. So I took Mr. Wheaton down to the house, and he looked at the machine.

Q. What was the result of that interview?

A. Well, Mr. Wheaton first said there was nothing in patents, and the man would not get justice, and all that——

Mr. MILLER:

Q. In regard to the machine itself?

A. Oh, he said it was an infringement.

Q. Were there any negotiations had with you at that time in regard to negotiating the matter?

121 A. That was the object, why I had him down to the house.

Mr. MILLER:

Q. Was Mr. Kalloch acting in the matter in any way?

A. Mr. Kalloch talked to me before that, in 1881, I think, but I am not certain about the date, without looking at the paper.

Q. What paper?

A. The contract. We had a contract between us.

Mr. MILLER:

Q. Was any contract ever signed?

A. No, sir, I refused to sign it.

Q. The matter then dropped?

A. The matter dropped.

Q. Mr. Cramer, something is said in your patent with regard to a cushion marked "F" and a block "*f*." Just state what is the object of that device in the construction.

A. The loop-holes have to be large in the base, in order to admit of the treadle being moved in, and this block cushion, as it was called, is put up on the top to fill up this hole so that you cannot raise up the treadle. That is, if one wants to purposely raise up the treadle, they could do it so much better without that block in there. That is all the block is in there for.

Q. Suppose no block was in there at all. Could you run the machine just as well?

A. Just as well. It is not essential to the running of the machine at all.

Q. Would the parts be in alignment?

A. Yes, sir.

Q. And you say the object of the block was to prevent any one lifting it out by hand?

A. Yes, sir.

122 The COURT: That is the block "*f*" in the patent?

Mr. MILLER: Yes, sir.

Q. The piece of the leather is also said to be fitted into the groove on the upper side of the trunnion. What is the object of that piece of leather?

A. That makes it still softer, and it would make less noise if there

was a piece of leather there than it would just with a piece of wood. It is kind of an extra thing.

Q. And that, you thought, would be some sort of an additional improvement if you added it?

A. It makes it a little softer.

The COURT:

Q. You mean, for the oscillation of the trunnion?

A. Yes, sir.

Mr. MILLER:

Q. But you say that is not essential to the mechanism or the operation of the machine?

A. No, sir, it is not. And in carrying the machine about, of course, if it was not in there, it would slip to one side.

Q. Mr. Cramer, have you noticed the fact that the Singer Manufacturing Company have numbered machines which they have on the market?

A. I have, from time to time.

Q. What did you notice in that regard?

A. I noticed one machine in Sonora numbered seven million and some odd hundred thousand, I don't remember the exact number; and then I noticed another, of over thirteen millions, and another in the fourteen millions, and another sixteen millions and some odd hundred thousand. I have the exact numbers somewhere.

Q. You saw those numbers on the machines?

123 A. I saw them on the machines, yes, sir.

Q. On what part of the machine were those numbers?

A. On the head; that is on the top part. Let me make a correction. I got the numbers of the thirteen-million and fourteen-million one from the circular. The sixteen-million one I took from the head, and the seven-million one from the head, and the fourteen-million [illegible] and some odd thousand I took from the head also. But there are two there, one in thirteen millions and one in fourteen millions, that I took from the circular.

The COURT: What does the witness mean? I do not understand him.

Mr. MILLER: He means these circulars, your honor.

The COURT: The printed circulars?

Mr. MILLER: Yes.

Q. There was one question I omitted to ask you in regard to this Exhibit "P." You will notice down at the bottom is an iron bar that connects across?

A. Yes, sir.

Q. Forming part of the diagonal cross-brace?

A. Yes, sir.

Q. What is the object of that bar?

A. I do not see that there is any object in it. It can be omitted, if they like.

Q. If you were to cut off this bar at the point where the bend

occurs on both sides, and take it away entirely, would the machine operate just the same as before?

A. Just the same.

Q. This evidently strengthens it a little?

A. Oh, yes; it strengthens it a little. But it works just as well without it.

124 Q. It may just as well be dispensed with?

A. Yes, sir.

Q. Do you call that a tie-rod?

A. No, sir, that is no part of the rod at all.

Q. It is an integral part of the whole brace, is it?

A. It is a part of the brace.

Q. All cast in one piece?

A. All cast in one piece.

Q. I presume you are still the owner of this patent, are you?

A. Yes, sir.

Q. You have been, continuously, ever since it was issued?

A. Yes, sir, I have been the owner of it ever since it was issued.

Cross-examination of HERMAN CRAMER:

Mr. WHEATON: The patent expired last January, did it not?

A. I think so.

Q. Then you are the owner of a dead patent yet?

A. I do not claim to be the owner of a dead patent.

Q. Do you not call a patent that has expired a dead one?

A. A dead patent is a dead patent—no patent at all.

Q. Mr. Cramer, what do you understand a trunnion to be?

A. A trunnion is a bearing, Mr. Wheaton.

Q. From what do you get that definition?

A. From my meaning, and all the authorities that I have hunted up make a trunnion a bearing.

Q. Trunnions are used as bearings, are they not?

A. Yes, sir.

125 Q. But the trunnion itself is a piece that is cast on to something else, is it not?

A. Not necessarily.

Q. I will read you the definition of a trunnion as taken from the Century Dictionary.

"1. One of the cylindrical projections on the sides of a cannon, cast or forged in one piece with the cannon itself, which support it on its carriage. In the United States artillery service the diameter of the trunnion in smooth-bore guns has generally been equal to the diameter of the bore. See cut under howitzer.

"2. In steam-engines, a hollow gudgeon on each side of an oscillating cylinder, which supports the cylinder, and through which steam is received and exhausted." Have you been able to find any definition, in any of the dictionaries, literary or mechanical, that gives any different meaning to the word "trunnion" than that which I have just read?

A. I find in that very thing that you just read that the bearing of the cannon is called the trunnion.

Q. I will read that again: "In steam-engines, a hollow gudgeon on each side of an oscillating cylinder, which supports the cylinder, and through which steam is received and exhausted." Which one of those words speaks of a bearing?

A. You read about a cannon there, and that it had supports. Anything that supports is a bearing, like a trunnion. Anything that supports is a bearing—a trunnion.

Q. You say you find in that sentence the word "bearing"?

126 A. I do not say anything of the kind. I say the trunnion is a bearing.

Q. Does this say that the trunnion is a bearing, or that it is a gudgeon?

A. It is a bearing for the weight of the cannon upon its axle. It has a bearing and that is a trunnion. It bears, and hence it is the bearing. Anything that bears is a bearing, and I call it a trunnion in this case.

Q. What is a bearing, where two surfaces in mechanics come together and move?

A. Where two parts meet is a bearing.

Q. How is that?

A. Two parts makes always a bearing. One may be stationary and the other loose, or one may be loose and the other stationary, *vice versa*. It does not make any difference about that.

Q. It takes two different parts to make a bearing, does it not?

A. Yes, sir. That is, you could not have a bearing with one piece, because one piece would be an independent piece by itself, and unless it connected with some other piece, it would not be a bearing at all. It might be intended for one, but would not be one until you made it a bearing.

Q. But the pieces themselves are something more than a bearing, are they not?

A. The pieces themselves are not a bearing at all—the pieces themselves.

Q. In this instance a trunnion is one of the pieces, is it not?

A. A trunnion is one of the pieces?

127 Q. Yes.

A. A trunnion may be a piece and may be pieces, just as you start with. If you use two it is trunnions, and if you use one, it is a trunnion.

Q. The bearing is only where the two outside surfaces come together, is it not?

A. Two outside surfaces?

Q. That is, the outside of the trunnion and this surface of the bearing underneath?

A. The trunnion is a bearing. There is no particular shape or form to a trunnion. One may be one kind of trunnion, one kind of bearing, and another another kind of bearing. I think you will find the books do not give you any particular shape or form of a trunnion.

Q. With reference to these devices mentioned in the definition I

have read, is it not necessary that the trunnion should be circular, of a true circle, so far as the bearing part is concerned?

A. What do you mean by that, Mr. Wheaton? I do not exactly understand you.

Q. I mean this: If it is going to oscillate in a bearing as it does in the case of a cannon, that is, the two ears on the side of the cannon, it has got to be circular, has it not, in order to let it turn?

A. The bearing—let me explain it to you, so you will understand it. A bearing is always where it bears. It does not matter whether the top is circular or not. The bearing is always where it bears. It never bears on the top, so it is not necessary to be circular on the top.

Q. My question was limited to the bearing part. I said, so far as the bearing was concerned.

128 A. But we do not want to have a misunderstanding about that, that every bearing must be round like a ball; that you cannot have a bearing that is not like a ball, all round. The bearing is the part that comes in contact, that bears. You get the idea?

Q. I think so.

A. I will make it as plain as I can for you.

Q. Did you ever see one of these cannon with the trunnions on the side unless the trunnion was of circular form?

A. Yes, sir; I have seen cannons with round circular forms on the outside, but I have not seen a cannon that bore on the top, where the bearing was on the top of that round form, never—the weight is always on the bottom.

Q. You have not heard me make a suggestion that there was any bearing on the top of these trunnions, have you?

A. No, sir. But I inferred from what you asked me there that trunnions must always be round, and there could not be any trunnions unless they were round.

Q. I did not so say.

A. That is the way I understood you.

Q. That is because you talk faster than you think, I guess. I asked you if it was not true that they were round so far as the bearing was concerned. I limited it to the bearing part of it.

A. You mean the bottom of the circular?

Q. Yes.

A. Yes, sir, circular to meet its seat, certainly.

Q. Is it not always the case, too, in the case of the trun-
129 nions on oscillating steam-engines, that they are also circular so far as they have a bearing.

A. I am not so well familiar with steam-engines as I might be. I do not understand the construction of steam-engines as well as I might. But that I know, that a trunnion is a bearing in anything. A bearing is denominated as a trunnion and a trunnion as a bearing, and I think Knight's or any one of those books will say it is not a thing uniform in shape, or of any particular shape. So those shapes vary as circumstances and cases require.

Q. Have you ever found a definition in looking for that of a trunnion where it said that a trunnion was a bearing?

A. Well, yes.

Q. Can you produce it?

A. I don't know as I can produce everything that I have ever seen. I don't know as I can now.

Q. Could you produce it if you had all the dictionaries there are out?

A. Men make dictionaries and men make language. The common understanding of a trunnion is a bearing. That is the understanding in common terms, that a trunnion is a bearing. I have never yet seen anything that was a bearing at all but what had trunnions, but what was denominated a trunnion, like you say on the cannon. The cannon might lay on the ground, and it would not have any bearings then.

Q. What have you to say to this definition in the dictionary, where it says, "One of the cylindrical projections on the sides of a cannon, cast or forged in one piece with the cannon itself"?

130 A. The cannon is cast in one piece?

Q. "One of the cylindrical projections on the sides of a cannon, cast or forged in one piece with the cannon itself."

A. In the first place, I haven't the knowledge of how a cannon is made exactly. I have seen cannons, but I don't know how they are made. I suppose, though, that they are cast in one piece. That is what I suppose, but I have never seen one cast, and I cannot say exactly how they are made.

Q. In your own patent, do you not describe the treadle and the trunnions as all cast in one piece?

A. I do, sir. That is, the whole treadle is cast in one piece.

Q. That includes the trunnions?

A. That includes the bearing, all of it; the whole treadle is cast in one piece. That is what I mean by that, the whole treadle, the foot piece; not the brace and all, but just the foot piece.

Q. When you have fitted your treadle and have it ready to go into the machine, does it have the trunnions on it, or not?

A. Why, certainly.

Q. In this Plaintiff's Exhibit "D" which you have put in as one of your treadles, as I understand it, as an exhibit, that is a full-sized treadle, is it not?

A. That is a full-sized treadle, yes, sir.

Q. As I hold it in my hand now, does it have the trunnions on it?

A. It has trunnions on it—that is——

Q. Where is the bearing now, as I hold it in my hand?

131 A. The trunnions are on there, but they do not become trunnion bearings until you put them to a use to make a bearing. But the bearings are on there.

Q. I was not asking about the trunnion bearings, but about the trunnions themselves.

A. We do not want to get mixed up.

Q. In this treadle as I hold it in my hand, the trunnions are there?

A. Yes, sir.

Q. And yet there is no bearing there as I hold it now?

A. No, sir; there is no bearing there now.

Q. Then there may be trunnions without there being bearings?

A. Yes, sir, there may be trunnions not in use, and then they are not bearings.

Q. And that makes a distinction between a trunnion and a trunnion bearing, does it not?

A. A trunnion is something ready for bearing, and a trunnion bearing is one put in place for operation.

Q. A trunnion itself is not a bearing, is it?

A. No, sir, a trunnion itself—you may take a bolt, and there would not be any bearing; if you have a ton of bolts, you simply have a ton of bolts.

Q. Do you not use this language in your patent: "Below the bearings of the trunnions B, I provide cups M," etc.

A. Yes, sir.

Q. Then does that not recognize the fact that the trunnions are one thing and the bearings of the trunnions another?

A. Below the bearings I used cups. That is, the treadle is in there, and——

132 Q. (Interrupting.) You are getting off onto something entirely different now.

A. It is not. You cannot make me out to make a thing out that is not the fact. There is no bearing until you make a bearing, and when the two pieces are in there, then there is a bearing; and when one piece is separate from the other, it is not a bearing.

Q. You testified directly, as I understood you, if I understand you aright, that a trunnion is a bearing and nothing else.

A. A trunnion is a bearing when you make it as a bearing, and not when you do not use it as a bearing.

Q. But it is still a trunnion, is it?

A. It is a trunnion, yes, preliminary to its being a bearing.

Q. In your treadles, you have followed the definition that I read from the Century Dictionary, and have cast the trunnions solid in one piece with the treadle, have you?

A. Cast the trunnions solid with the treadle?

Q. Yes.

A. That is correct. The trunnion bearings are solid in one piece with the treadle.

Q. Suppose that trunnion was broken off.

A. Yes, sir.

Q. That the end of it here was a separate device.

A. I understand.

Q. Would you still call that a trunnion, without it being attached to anything?

A. If it was a piece of iron cut off there?

133 Q. Yes?

A. It would be simply a piece of iron; nothing at all—a piece of casting.

Q. It would not be a trunnion, would it?

A. Nothing at all only a chunk of iron. You could not call a piece of old iron any bearing.

Q. You take this conical bolt as I hold it in my hand now. What is that?

A. That is a conical bolt.

Q. It is not a trunnion, is it?

A. When you use it as such, then it becomes a trunnion, and not until then. That is a conical bolt.

Q. As I hold it now, is it a trunnion?

A. It is a conical bolt now.

Q. But you are not willing to say that it is a trunnion?

A. No, sir. The minute you make use of it, and go on the second and third stage, then you accomplish just what I say.

Q. We will come to that later. We are talking now about just what it is.

A. All right.

Q. As I hold that in my hand now, is it a trunnion?

A. It is a conical bolt, just as you hold it in your hand.

Q. You can answer the question easily, I think.

A. It is not a trunnion, not now.

Q. I understood you to testify in your direct examination, when Mr. Miller asked you, that it was a trunnion.

A. When it is in place.

Q. He was asking you, if I recollect right, what it was——

A. (Interrupting.) I think I remember right. When it is in the brace, used as a bearing, it is a trunnion, and he pointed
134 to it in the brace, as I understand. A conical bolt making a bearing, called a trunnion.

Q. Did he not ask you about it as a device by itself when in use in the machine?

A. A conical bolt.

Q. Did you not say it was a trunnion without a particle of hesitation?

A. I don't think so; that would not be right.

Q. If you did say it, you take it back now, did you?

A. I don't think I said that was a bearing. I don't see how any one can say it is a bearing when it is not.

Q. That was what was bothering me.

A. I hope you have got it plain now.

Q. I did not see how you could call a mere conical bolt a trunnion. Now, referring to Plaintiff's Exhibit "P," are there any trunnions cast on the treadle in that?

A. Are there trunnions cast on the treadle? What do you mean by that? Let me explain it to you.

Q. You ought to know what it means.

A. Do you mean whether the treadle in the center has not a projection like that, which make the bearing—do you mean that?

Q. In your patent you say, "B represents the two trunnions, cast as a portion of the treadle and extending from its sides into loopholes in the common cast-iron cross-brace C"?

A. Yes, sir. That is the extension of the treadle here (showing). There is the extension of the treadle——

Q. (Interrupting.) Suppose you wait until I ask the questions. When you signed and swore to these specifications, did you understand the meaning of that sentence?

A. I think so.

135 Q. "B represents the two trunnions cast as a portion of the treadle?"

A. Yes, sir.

Q. "And extending from its sides into loop-holes in the common cast-iron cross-brace C." Now, in Exhibit "P," which is part of the defendant's machine, are there any trunnions cast as a portion of the treadle?

A. I think so. I see that treadle, the center of it projects. If I understand the definition of trunnion, I see them on there.

Q. Where does the trunnion in the treadle Exhibit "P" commence and where does it end?

A. The treadle is one piece there.

Q. In Plaintiff's Exhibit "P"?

A. Yes, sir. The treadle is one piece just like the other—it is all one piece.

Q. Is there a trunnion in that which extends from its side, that is, from the side of the treadle, into the loop-holes in the cross-brace?

A. The loop-holes are in the treadle. The holes are in the brace, stopped up with what constitutes a trunnion.

Q. In your patent, the loop-hole that you describe is in the lower extremity of the cross-brace, is it not?

A. Yes, sir, in the lower extremities of the cross-brace.

Q. And according to the description of your patent, the trunnions are cast as a separate part of the treadle, and extend into these loop-holes, do they not?

A. That is correct.

Q. In this Exhibit "P," the defendant's machine, are there any trunnions that extend into the loop-holes——

A. (Interrupting.) You have the thing reversed there, Mr. Wheaton.

136 Q. Let me ask the question. In Exhibit "P," part of the defendant's machine, are there any trunnions cast solid with the treadle which extend into the loop-holes of the cross-brace?

A. There are solid bearings on that treadle.

Q. Did you ever know a treadle in a sewing machine that did not have solid bearings?

A. I did not.

Q. We are not talking about solid bearings. I did not ask you about solid bearings. Sewing machines have always had them. You did not invent solid bearings, did you?

A. No, sir. I do not claim that I have invented bearings of any kind. I hung it in the brace. That is what I invented.

Q. I asked you if in Exhibit "P" there are any trunnions cast

solid with the treadle, which extend into any loop-holes in the cross-brace.

A. You mean to say——

Q. (Interrupting.) You know what I mean perfectly well.

The COURT: Mr. Wheaton, is there any controversy upon this subject?

Mr. WHEATON: Yes, your honor. We do not have anything of the kind.

The COURT: I know, but you claim in this case that you have not any trunnions that extend into the loop-holes of the cross-brace, do you not?

Mr. WHEATON: We have nothing of that sort.

The COURT: And you do not claim that, do you, Mr. Miller?

Mr. MILLER: We do not.

137 The COURT: Then let it pass on. This witness is probably not able to follow the technical questions that you propound, but I should judge from what Mr. Miller said in his opening, that there is no controversy; that, in fact, it is admitted that there is the difference that you are now pointing out to this witness between the two. I infer that later on Mr. Miller will contend that they are equivalent. I do not know anything about that, but I suppose that is his intention.

Mr. MILLER: That is the proposition exactly.

The COURT: If that is so, why do you not just assume that, whatever is conceded, and proceed with the rest of it?

Mr. WHEATON: I want the jury to be absolutely and entirely certain about what these differences are.

The COURT (after further argument): Proceed with the case, Mr. Wheaton. I thought probably we might shorten it. However, go on.

Mr. WHEATON:

Q. You say in your patent "C represents the usual cast-iron double brace connecting the two end legs diagonally in a plane generally vertical." What do you mean by the word "usual" there?

A. The brace used before the event of my invention was simply used to stiffen the frame. They had no bearings, the treadle never bore on the vertical center frame until I put it there. That is my intention, hanging the treadle in the vertical double brace.

Q. I did not ask you anything about that.

A. You asked me what I meant by it, the usual brace.

Q. I asked you what you meant by the word "usual"?

138 A. That is the old-style brace. That was the brace used in the Singer and other machines to stiffen the frame. They were old and in common use in the first machines I ever saw. The brace simply to stiffen the frame was in old and common use.

Q. The first machines you ever saw had this cross-frame, did they not?

A. That cross-brace?

Q. The first machines you ever saw had a cross-brace for connecting the legs of the two ends of the sewing machines?

A. That brace never connects the two ends of the sewing machine. The brace was always put in between the two ends, and then the tie-rod held it together.

Q. That is exactly what is done in your case, is it not?

A. It is exactly the thing done in every case.

Q. It is exactly the thing done in your case?

A. In every case.

Q. There is nothing new in the treadle itself, is there?

A. What do you mean in the treadle itself—in the iron?

Q. The treadle put into the lower part of the sewing machine to be worked by the foot for running the machine?

A. It makes all the difference in the world where the treadle is, in the lower part of the sewing machine. It makes all the difference in the world. There is where all the trouble came in, of where the treadle was put.

Q. Nearly all the sewing machines that were in use that worked by the foot before you went into business and when you went into the business, they all had a treadle, did they not?

A. A foot piece, yes, sir.

139 Q. They all had a treadle near the bottom of the machine, did they not?

A. Yes, sir.

Q. And they all had a pitman?

A. Yes, sir.

Q. And those treadles would all rock, would they not?

A. Yes, sir, they would oscillate. Is that what you mean? That is, all treadles oscillate.

Q. I mean rock.

A. Well, yes. That is one and the same thing, as I understand it.

Q. And they all had a pitman, this vertical wooden rod shown in Plaintiff's Exhibit "P"?

A. I think there were some that did not have a pitman.

Q. Can you not wait until I get the question asked? And they all had a pitman, this vertical wooden rod shown in Plaintiff's Exhibit "P," which connected the treadle with the crank of the band wheel, so that by rocking the treadle you would drive the band wheel, had they not?

A. All? I don't know about that, but all that I am familiar with had a treadle. There may be some in the world that I was not familiar with.

Q. In all of them this band wheel here was driven by the treadle, and the two were connected by the pitman, as shown in Exhibit "P," were they not?

A. A treadle like that, all of them with a treadle like that, with a band wheel on the brace hung like that?

Q. I did not speak about how they were hung, and did not use the word "hung," or refer to the manner of hanging at all,

140 but the fact that there was a treadle hung in some manner, so that it would rock, and by rocking that treadle you drive

a band wheel, the treadle and band wheel being connected together by the pitman?

A. Yes, sir, that is the general way; the treadle rocks, and the band wheel is operated by the rocking or oscillation of the treadle.

Q. And that combination and operation belonged to sewing machines prior to 1880, did they not?

A. Yes, sir.

Q. Prior to 1875, even?

A. Yes, sir; the rocking motion was common to all machines.

Q. As described in your patent, do the lower ends of your cross-brace touch the legs of the sewing machine at all?

A. Do they touch the lower end of the sewing machine? Yes, sir, I think so; I think they touched; it depends upon the length of the tie-rod as to that matter, that is, this rod here.

Q. You say in your patent, "Pieces of leather F or other soft material cover the top and end of each trunnion, to serve as cushions to keep the same close in its bearing, to prevent the noise which would result were the trunnions permitted to bounce and thump endwise, when the treadle is in motion. The leather F is fitted to the curve of the upper side of the trunnion, which is an arc of a cylinder whose center of oscillation is the lower edge of the trunnion. The same leather also interposes between the end of the trunnion and the adjacent iron; *f* is a block serving as a
141 mere backer, to which the cushion F is attached," and so on. But the particular part that I refer to is this: "*f* is a block serving as a mere backer, to which the cushion F is attached. This block conforms to the back and top side of the cushion and fills the loop-hole in the brace above the trunnion. It also has tangs or projections *e*, resting in suitable recesses in the brace C, which are held between the brace and the web of the leg E, by which means the block and cushion are held in place." Does not that tang, as you call it, or projection *e* of the leather, reach up so as to prevent the cross-brace from touching the leg?

A. Where the legs come right in contact with the brace, it is not——

Q. (Interrupting.) That is not an answer to the question.

A. If you will allow me to explain it to you, I will try to make it as plain as possible. You see this loop-hole has got to be large enough so you can take the treadle in and out, and——

Q. (Interrupting.) You are going on with a lecture that I did not ask you anything about.

A. I thought you asked me to explain.

The COURT: Answer Mr. Wheaton's question, Mr. Cramer.

Mr. WHEATON:

Q. Please look at the left-hand side of figure 1 of the drawings, and see whether it does not show a vacant space there between the cross-brace and the vertical leg E?

A. That shows a vacant space, but there is no——

Q. (Interrupting.) In that side the leather cushion is not shown, is it?

A. Which?

142 Q. On the left-hand side of figure 1 of the drawings?

A. I do not think any cushion is shown there.

Q. Now go to the right-hand side of that same figure, and there you see the block and cushion, do you not?

A. I cannot distinguish this here from leather in the drawing, but I know what is meant by it. I cannot distinguish it from the drawing.

Q. Have you not read your patent so as to know?

A. Yes, sir, I have read it time and time again. But I do not understand and never did understand that this block was an essential to the working of the machine. It is not an essential to the working of the machine in the least.

Q. When you threw the whole thing away, you conclu-ed it was not——

A. (Interrupting.) We threw nothing away. We simply say that the hole is to be large enough to permit the treadle to be placed in it, and this block is put on the top to keep any one from raising it up, and the block on the top you will find—you will find something of that kind in every treadle, to keep it from raising up.

Q. What of it? Suppose you do.

A. Well, they are made that way.

Q. Going now to the right-hand side of figure 1, does it not show what you call the tang, or the projections *e*, reaches up until it comes between the cross-brace and the leg, and prevents the cross-brace from coming in contact with the leg?

The COURT:

Q. The tang *e* on the right-hand side.

A. I understand. I could illustrate it better by models.

143 Q. Can you point the tang out there in that machine?

Mr. WHEATON: My question, if the court please, applied particularly to that drawing.

The COURT: You may answer Mr. Wheaton's question. I thought perhaps you could answer it without any difficulty. Just answer Mr. Wheaton's question, Mr. Cramer.

Mr. WHEATON: I do not understand that model to be like the patent.

The COURT: Answer Mr. Wheaton's question, Mr. Cramer.

The WITNESS: Here it is (pointing).

The COURT: Read Mr. Wheaton's question, Mr. Reporter.

(Last question repeated by reporter.)

A. The tang is a projection upward from the block—that is what it is, a projection upward, as near as I can explain it to you, as you find it there (showing).

Mr. WHEATON:

Q. The question is, does that tang, as shown in figure 1 of the drawing, project upwards so that it comes between the brace and the sewing-machine legs?

A. It does.

Q. So as to prevent the brace and the legs from coming in contact with each other?

A. It was not intended for that purpose.

Q. Well, is that the fact or not?

A. To prevent the legs from coming together? There is a leg on each side of the machine.

Q. Do you not understand that question?

A. No, sir, I do not. You stated the legs coming together.

144 Q. With that tang projecting as shown in figure 1 on the right-hand side, does it not prevent the brace from coming in contact with the leg of the machine?

A. It does not.

Q. You are sure of that?

A. That part is governed by the journaled tie-rod. It is not governed by anything else except just the journaled tie-rod, journaled on each side, which enters the legs, and that makes the distance between the two, and that is common to all sewing machines, and is just as old as the sewing machine is old.

Q. The tie-rod is this rod across the bottom, is it not?

A. Yes, sir.

The COURT: The rod D?

A. Yes, sir.

Mr. WHEATON:

Q. That is supposed to project through the leg and have nuts on the outside of the leg, is it not?

A. Yes, sir, it is shown that way in the drawing.

Q. Suppose those nuts were screwed so tight as to actually spring the lower legs on the cross-bar?

A. You never do that.

Q. Even in that case, could the lower part of the cross-brace come in contact with the iron legs?

A. We do not spring it. That is something we never do.

Q. Can you, as described in this patent, bring the leg of the sewing machine and the cross-brace in contact with each other, or not?

A. Can we fix it so we will?

Q. As described in the patent.

145 A. As described in the patent, the whole of it works in combination, that is, the leg on each side and the tie-rod is always made so as not to produce any strain upon the vertical brace at all. It is made that way.

Mr. WHEATON: I would like to have the court ask the witness if he cannot answer a simple question.

The WITNESS: I will answer it as well as I can.

Mr. WHEATON:

Q. I will ask you once more, and ask you just simply answer the question I ask. As described in the patent, can you bring the leg

of the machine and the cross-brace in contact with each other at the lower end of the cross-brace?

A. Close together, or so as to strain?

Q. Can you bring them in contact with each other?

A. The tie-rod can always be made so as to come right close together, and no further, just the required amount and no further. It is always constructed that way.

MR. WHEATON: I give it up, if your honor please.

Q. In this Plaintiff's Exhibit "P," you find the band wheel and the treadle and the pitman all carried in the cross-brace, do you not?

A. Yes, sir, all in one piece of casting. That is, I always took it that way. I will look at it and see. (Examines model Exhibit "P.") Yes, sir, that is one piece of casting.

Q. In the defendant's machine, all of these parts, that is, the treadle, the pitman, and the band wheel, can all be put together and properly adjusted before the legs are put on, can they not?

A. Yes, sir.

Q. Can you do that with a machine made as described in your patent?

A. Yes, sir.

146 Q. In your patent, is not a band wheel shown as journaled on the stud, that is, from the legs?

A. I have no patent on that wheel, but I am the inventor of putting the band wheel upon the brace, though I did not secure a patent upon it. It is immaterial. That is not a patent, this wheel upon the leg, and neither is there a patent upon hanging the wheel upon the brace, for I have them—I corresponded with the Singer Company and told them that that was also my invention, and I didn't think I was under obligation to spend another $150 to get a patent upon that.

Q. The question was simply whether, in your patent, the band wheel is hung on the legs of the machine.

A. In that respect it is hung upon the legs. That is correct.

Q. If the band wheel in your patent is hung upon the legs, how can you put in the cross-brace, and adjust it with reference to the treadle, as is done in the Singer machine, where the band wheel is hung in the cross-brace itself?

A. If I want to do that, I take my treadle with the band wheel in the brace, but I do not always do that.

Q. Is it a fact that you can do it and keep within the description of your patent?

A. I don't think it has anything to do with my patent whatever. My patent is simply for a method of hanging the treadle in the lower end of the vertical double brace.

Q. I call your attention to the fact that in this machine the band wheel and the treadle are all hung in the cross-brace, and the

147 pitman, and that by carrying them in the cross-brace, you carry all the parts put together and adjusted with reference

to each other. I ask you if you could do that in your own machine. You state that you can?

A. Yes, sir, but——

Q. (Interrupting.) That is, your machine as described in the patent. Now, going a little further. You state that the band wheel in your machine is hung to the leg of the machine?

A. I say I have no patent on the band wheel at all, and it is optional with me as an inventor to use a band wheel on the leg, or to use my wheel upon the brace.

Q. I asked you whether you could do with your machine, as described in the patent, what is done here, that is, carry the band wheel and the treadle bar all in the brace, adjusted with reference to each other, and you told me you could. I asked you how it is possible to do that, so long as your band wheel is carried by the legs of the machine and not by the cross-brace at all.

A. The answer to that is that I have no patent for the wheel upon the leg, and that I do own the right to place my wheel upon the brace, and that that is public property today and has been for years. Therefore, a patent for handing that in the brace is null and void. It is public property.

Q. I do not know whether the witness can understand the question, or what is the trouble. Will you tell me how your last answer explains how, with a machine made under your patent, you could put the band wheel and treadle bearing all in the brace?

A. My patent does not embody the wheel at all. My pat-
148 ent does not embody the wheel. Do you see the point? You are trying to make me believe that I have a patent on the band wheel.

Q. I propose to show the difference between the defendant's machine and your patent. For that reason I point out that in the defendant's machine the cross-brace is so constructed that the treadle bar, the band wheel, and the pitman, can all be adjusted with reference to each other in that cross-brace and before it is put into the legs.

A. No, sir. There were machines long before that with the band wheel in the brace.

Q. I ask you again: Can you, with a machine made as described in your patent, put the band wheel, the pitman, and the treadle bar and the treadle itself all in the cross-brace, and have them operate together, properly adjusted, as is done in this Singer machine?

A. I have a patent treadle of my own with the band wheel in the brace something like that. You will find it in the models here. There is one model here that you will find it in right there.

Q. I am talking about this patent.

A. I have no patent on this leg. It is public property. The wheel on the leg is public property. I have no patent on that.

Q. I was not talking about anything you do not have a patent on.

A. That is it exactly.

Mr. WHEATON: This is important, if your honor please, to point out the differences in these different operations.

149 The COURT:

Q. Can you explain to Mr. Wheaton and the jury how it is that you can, on this patent that you have here, operate the band wheel, the pitman, and the treadle, as it is in the defendant's cross-brace, and their mechanism?

A. Just shortly, I had a wheel upon the brace a great many years——

Q. (Interrupting.) But, Mr. Cramer, that is not the question. In this figure 1, you observe that you have the band wheel on the leg of the machine?

A. Yes, sir.

Q. And not upon the cross-brace?

A. Yes, sir.

Q. That is different from the way it is there?

A. Yes, sir.

Q. That is on the cross-brace there in Plaintiff's Exhibit "P"?

A. Yes, sir.

Q. How could you, with this machine here, operate this band wheel as it is there?

A. The band wheel with this patent could not be worked, because the band wheel is not on the brace.

Q. The brace is not so arranged here as to carry the band wheel?

A. No, sir.

Q. It is a different form of brace, is it not?

A. Yes, sir.

Q. And there is no place there where you could attach a band wheel and operate it?

A. No, sir.

Q. Your explanation for that is that you have no patent for that and did not make any claim for it?

A. Yes, sir, that is it.

Mr. WHEATON:

150 Q. Then, in that respect there is a difference between the defendant's machine and yours, is there not?

A. So far as this drawing is concerned, there is a difference, but there is no difference so far as my invention is concerned, outside of the patent.

Q. We do not know anything about your invention outside of the patent. You have sued on this patent and not on any invention outside of it. As a matter of fact, then, you cannot, with your machine as described in the patent sued on, put the band wheel, the treadle, and the pitman all together, and adjust them with reference to each other, before the legs are attached, can you?

A. Not in this drawing, I could not, no.

Q. On any machine of yours made by that drawing?

A. No, sir, not on that.

Q. Did you intend to testify that you could?

A. I say that I had treadles, my patent treadles, with the band wheel on the brace and adjusted just like that.

Q. We are talking about just what you have in this patent.

A. You do not want me to sue you for something I do not own? I have it: I am the owner of it and the inventor of it. You do not want me to sue you on the wheel, too? I sue you just on the treadle.

The COURT:

Q. Mr. Wheaton is endeavoring to connect the treadle with the operation of the sewing machine, and he is asking you whether or not on that cross-brace, as you have it in your diagram, you could operate the band wheel as displayed by this drawing here.

A. I could not, upon this drawing.

151 Q. Because in this case it is on the cross-brace, and in your case it is not?

A. No, sir.

Q. How were those manufactured? Were they placed on the leg of the sewing machine, or upon the cross-brace?

A. I have some manufactured that the wheel is on the brace.

Q. The wheel is on the cross-brace?

A. Yes, sir, and that is my property, and I am not suing for it.

Q. You have not a patent for it?

A. No, sir. It is my property, but I have no patent on it.

Q. It is a method you have?

A. I have had it for a great many years.

Q. I know, but you have no patent for it?

A. No, sir. I made application for it at one time and it was denied.

Mr. WHEATON:

Q. How many machines did you say you succeeded in selling with your treadle arrangement in it, with those trunnions and knife-edges in it?

A. Between twenty-five and forty.

Q. How many years did you have them on the market?

A. I had them manufactured, the bulk of them I had manufactured in 1883 at the O. K. foundry.

Q. In 1883?

A. In 1883—that is, the larger amount of them; and then I had some manufactured in Sonora in January, 1891, and then so on, quite a number of them at the Sonora foundry.

152 Q. Let me see. You commenced in 1881, you say, with the Sonora foundry?

A. What do you mean by that? I commenced with the casting.

The COURT: Before proceeding with that, Mr. Wheaton, I would like to ask this witness another question about this model here: Whether or not, Mr. Cramer, a true alignment *or* parts is not dependent upon the band wheel being a part of the cross-brace.

A. The true alignment of the—that the band wheel has something to do with the cross-bar?

Q. No. I will repeat the question. Is it not a fact that the true

alignment of all the parts, of the treadle, the pitman, and the wheel, is dependent upon the wheel being a part of the cross-brace?

A. No, sir, I do not think that the true alignment of the treadle has anything to do with the wheel.

Q. What mechanism have you in your patent that would so adjust the cross-brace and wheel of the sewing machine that the true alignment of the parts would be preserved, notwithstanding the wear and motion of the parts?

A. The construction of the treadle—the alignment at the bottom and at the end of the treadle, is a ball bearing. Then the wheel sets up on the legs there also with a ball bearing. So that accommodates itself to any unevenness like that (showing). It is the only way to accommodate itself.

Q. I think probably your answer, and I want to know
153 whether that is your answer or not, is that the true alignment of the parts where the band wheel would be placed on the leg of the sewing machine and not upon the cross-brace, would depend upon the cross-brace at the bottom of the legs?

A. The leg must be set perfectly at right angles in that case.

Q. Is not that a fact? The legs always have to remain permanently in one position with relation to the cross-brace in order that the operation of the treadle and the pitman and the wheel should always be in true alignment. It would be necessary for the cross-brace and the legs of the machine to always be the same with relation to each other, would it not? To do that you secure that by the cross-bar at the bottom of the legs, do you not—in part, at least?

A. The alignment of the lower part is produced by the treadle alone, the alignment of that part alone.

Q. Yes, that is so.

A. If the alignment of the wheel is in perfect union with that, that makes a union.

Q. In order to secure the union between the treadle and the wheel, is it not necessary that the wheel should be on the cross-brace?

A. It is not necessary.

Q. You think it can be placed on the legs of the sewing machine and still preserve its true alignment, that is, the wheel with the treadle?

A. Yes, sir.

Q. During motion and wear and tear?

A. Oh, yes.

Q. No lost motion would occur after a long operation between the treadle and the wheel, if the wheel was upon another mechanism?

154 A. Lost motion always occurs in the course of time, with any mechanism, as a rule, unless it be so adjusted as to be self-adjusting, such as a knife-edge bearing, that it adjusts itself to the lost motion.

Q. Is there any lost motion between the wheel on the cross-brace and the other mechanism of the cross-brace?

A. Well, yes, they require adjusting from time to time.

Mr. WHEATON:

Q. When did you first put in any machine such a combination as is described in your patent?

A. When did I first do that as described in the patent?

Q. Yes.

A. In 1880 had it all complete.

Q. When did you first commence selling machines having that combination?

A. In 1881.

Q. For how many years did you continue to sell them?

A. From 1881 up to about 1884, or somewhere along there, 1884-'1-'2, or somewhere along there—until they came up there with theirs.

Q. You were selling them, then, for about four years?

A. Likely; yes, that would make it about that.

Q. You managed to sell about an average of about ten machines per year, then, or something less?

A. But I was trying to make arrangements to have them manufactured on a large scale, and put in my time corresponding with different parties.

Q. You managed to sell an average of ten a year?

A. I sold the number I mentioned with this patent; I didn't sell them by the year at all.

Q. Yes, but in that four years' time, you sold between thirty-five and forty?

A. Yes sir, that is it.

155 Q. How many sewing machines did you sell all together during that time, those that did have your patented device, and those that did not?

A. I could not tell you. I think I sold about—well, from about ten to eighteen a month.

Q. All together?

A. Yes, sir.

Q. You averaged about one a month that had this combination with your patent in, while you were averaging from ten to eighteen a month all together?

A. I sold them in a little while after I had them cast. It did not take me long to sell them. I did not sell them so many a year.

Q. If you were making $3.50 extra by putting that combination in, and you had the market to yourself, that is, the Singer Company had not come there until 1885, why did you not put this combination in all the machines that you sold?

A. Why did I not put it in all the machines I sold?

Q. Yes.

A. I was getting ready to have them manufactured at a very low rate, and corresponding with different companies to get them manufactured for the wholesale trade. When I got ready to go to work, why, the Singer Company came up here with this Diehl machine, with their agents.

Q. Did it take you four long years to get ready to put that combination into your machines?

A. It takes considerable correspondence here and there. It takes a good deal of work. I did something else besides just——

156 Q. And still the question is not answered. For some reason or other you did not put your combination in all the machines you sold, and yet you had the market to yourself?

A. I did put it in, so long as they lasted.

Q. So long as what lasted, the castings?

A. So long as I had machines. I had no trouble in selling them at all.

Q. So long as what lasted, do you mean?

A. So long as I had them on hand.

Q. Had what on hand?

A. Those patent treadles that I had.

Q. Why did you not make more?

A. Because the Singer Company came right into my territory and they had the same thing on. I could not run opposition against them.

Q. I am talking about the time that you were selling machines before the Singer Company came there.

A. Now, understand me. In 1883 I came down here and I had these castings made at the O. K. foundry, and then I shipped them up to Sonora, and then I put them on machines and sold them very rapidly, had no trouble in selling them at all. I was then corresponding with firms in the East, so as to get them manufactured by the wholesale; corresponding with different companies so as to get them put on the wholesale market, and if the companies had let me alone, if nobody had infringed, why, I could easily have doubled my trade right in that territory, with this device on. The other companies with their own devices would have stood no show

157 alongside with me at all, with their old devices, or, as we sometimes call them, old rattle-traps.

Q. That explains what you were trying to do, but it does not answer the question. You had your patterns made so you could get castings during that entire four years?

A. Yes, sir.

Q. You were selling machines at the rate of ten or eleven per month?

A. Yes, sir.

Q. Yet in all that time you only sold thirty-five or forty machines of your patented device?

A. Yes, sir.

Q. Which was an average of less than one machine a month?

A. I did not sell them that way.

Q. So you must have sold from nine to ten that did not have this combination in, to one that did?

A. Yes, sir.

Q. I asked you why you did not put this combination in the whole of those machines, as long as you could sell them readily, and

as long as you could make a profit of $3.50 on each machine by doing that?

A. Why didn't I do that?

Q. Yes.

A. I was getting ready to have them manufactured.

Q. You have said that before.

A. You wanted to know why I didn't do a certain thing?

Q. Yes.

A. I was busy with my business all the time, doing the very best thing I could possibly do to make them sell faster. Why doesn't a man sell a hundred machines in one day? Why doesn't he do that?

158 Q. Because he didn't have the Cramer combination on, I suppose.

A. I got it up into a prosperous business.

The COURT: Take one month. You sold nine or ten machines in one month, only one of which contained this mechanism or invention? Why did you not succeed in selling the other nine with the invention on?

A. I didn't have it that way; I didn't sell one a month—not that way at all.

Q. Did you not sell it that way?

A. Yes, sir.

Q. Just sold them all at one time?

A. Just as fast as I could get them ready. I sold them, and then I was out, and I had to go and make arrangements to have more manufactured, and during that time I was trying to make arrangements with eastern companies.

Q. When did you sell these thirty-five or forty machines?

A. In 1883 I had those manufactured at the O. K. foundry on Mission street, and then I took them up there, and I don't know how long it took, but not long, to sell them off.

Q. That was in 1883?

A. In 1883 and 1884, somewhere along there. Then I corresponded with different companies——

Q. (Interrupting.) We have heard of that already. We want to know why, while you were selling your own invention and machines without your own invention, you did not sell all of them with your invention on and none of the others?

159 A. Why didn't I get enough manufactured?

Q. No, why, when you were selling machines, why did you not sell all those with your device on, instead of the others?

A. This is only an attachment to the machine, and the customers—I would not call their attention to the extra part when I was out of it. I would not say anything at all about it.

Q. When you were out of the attachment, you did not say anything about it, but sold the machine without it?

A. Yes, sir. I was calculating to get them manufactured back East and introduce them to the wholesale trade, and corresponded with several firms for that purpose.

Mr. WHEATON:

Q. How many sets of castings for this Cramer combination did you have made in 1883?

A. There were thirty-five or forty of them made in 1883.

Q. How many did you have made before 1883?

A. Oh, I don't know; six or seven or somewhere along there.

Q. Those were made at Sonora?

A. Yes, sir.

Q. Before they were made in San Francisco?

A. Let me see. I think at the Sonora foundry I had cast—well, perhaps seven or eight, or somewhere along there. If it was very particular perhaps I could hunt up just the particular number, and when I had them cast.

Q. When did you have those six or seven made?

A. The first one was cast in January, 1881. That was the first one. I haven't got the account here to show how far apart they were.

160 Q. Do you know how many sets of castings for this combination you had made in 1881?

A. I don't know—four or five—somewhere along there.

Q. And then how long after that before you had more of those castings made at Sonora?

A. I could not tell you how long after that I had some more.

Q. You say that you could get them made and put them in your machines at a cost of $1.50 for each one?

A. I didn't tell you that price in Sonora. I didn't tell you I could get them made in Sonora at $1.50. That is what those cost that I had made down here. In Sonora I could not get them made for that.

Q. How much did they cost you in Sonora?

A. The first one cost me $5.50.

Q. I mean after you got the patterns made.

A. They cost about that in Sonora.

Q. How much?

A. About $5.50. I think I had some made as low as $3.

Q. When did you sell those six or seven machines that you first put the combination in?

A. I could not give you the date now, just exactly when.

Q. Along in what years?

A. I sold them that year.

Q. 1881?

A. Yes, sir. As near as I can remember, I sold them that year.

161 Q. When did you take any further steps to have any more castings made?

A. In 1883 I came to San Francisco, and I had this lot cast.

Q. What time in 1883 did you get those castings?

A. I don't know whether I have got the receipts with me, or not, but I think it was in the early part of 1883.

FRIDAY, *March* 30, 1900.

Cross-examination of HERMAN CRAMER resumed.

Mr. WHEATON:

Q. Mr. Cramer, what sewing machines, if any, were in sale in Sonora, in competition with the Singer Company's machines, in 1885, and from that time forward until the present time?

A. The American, the Wheeler & Wilson, the White—let me see if I understand what you mean by competition. You mean by competition, agents that are traveling, or men keeping machines on sale?

Q. Take both instances.

A. Both of them together?

Q. Yes. I want to know how many different manufactures of machines were on sale in the counties where you were doing business, in competition with the Singer Company's machines?

A. I don't know as they were in competition with the Singer Company's machines any more than with any other company's.

Q. Probably not. Those machines were all selling on the market, were they not, in competition with each other?

A. Yes, sir. They were in competition with each other,
162 not especially against one company, but against each other.

Q. Did any of those machines have the treadle hung in the cross-brace, other than the Singer Company's machines?

A. What do you mean by the cross-brace? Do you mean the vertical cross-brace? I understand that in one place you call a bar a cross-brace, and you call a rod a cross-brace. Therefore I wish to have it understood what you mean by cross-brace.

Q. I mean the vertical cross-brace, which you say in your patent is the usual cross-brace in sewing machines.

A. The cross-brace containing my patent was only sold by me and the Singer Company, that I know of. Does that answer your question?

Q. In any of these other machines that you have mentioned, was the treadle hung in a vertical cross-brace, or not?

A. No, sir.

Q. How many of those machines, if any, were you selling yourself?

A. Of what kind of machines?

Q. Any and all kinds.

A. How many was I selling myself?

Q. Yes, if you know.

A. That is, myself and family all together? Is that what you mean?

Q. Yes.

163 A. Well, from ten to fifteen or sixteen a month.

Q. Now, I do not mean the number of machines, but the number of manufactures of machines; that is, the different classes of machines.

A. I sold the American as a specialty, and I traded in second-

hand sewing machines; most sewing-machine men do that. Those I fixed up and put on patent treadles and sold them—I put on patent treadles on some of them. In that way, I sold most every kind of machine in the market, that is, in trading them in and refitting them, those that were good machines and worth being refitted, I fitted them up and sold them at some price.

Q. How many different manufacturers had machines on the market here in San Francisco for sale from 1885 up to the present time, in competition with the Singer Manufacturing Company?

A. I do not know how many different kinds, but I could name you quite a number.

Q. Please do so.

A. The Domestic, the Wheeler & Wilson, the Howe, I think the Crown was here, too, but I am not certain of that, and I think the Standard was here, and the Florence I think has gone out of date—I don't know as they were manufactured and sold during those times—and the Wheeler & Wilson, and the White—I think the White had an office here. I am quite positive of all of those
164 machines, if they were holding offices here at that time, and to the best of my knowledge they were.

Q. In how many of those different machines, if any, was the treadle hung in the vertical cross-brace?

A. In how many different kinds of those machines?

Q. Yes, in how many of those different kinds of machines?

A. In the Diehl patent.

Q. That does not answer the question.

A. Well, that is the only kind that I know of at that time. You refer back how many years?

Q. No, I want to know whether any of those different manufactured machines that you have mentioned, different classes, had the treadle hung in the cross-brace, or not?

A. In the vertical brace? Without going over how many I mentioned the Domestic didn't have it hung that way, the White didn't have it hung that way, the Wheeler & Wilson didn't have it hung that way, the Howe didn't have it hung that way, the Florence, whatever there was of them, didn't have it hung that way. It is the Diehl that had it hung that way.

Q. By the way, you have mentioned the Diehl patent. Please look at this document, and state whether that is a Patent Office copy of the specification and drawings of the Diehl patent to which you refer?

A. (After examining paper.) Yes, sir, that is the drawing
165 and a copy of the specifications of the Diehl patent I refer to.

Mr. WHEATON: If the court please, for the sake of illustrating Mr. Cramer's testimony I would like to have this patent put in evidence now and marked as Defendant's Exhibit No. 1.

(The letters patent referred to were here introduced in evidence and marked Defendant's Exhibit No. 1, the following being a copy thereof:)

Defendant's Exhibit No. T. 166

(No Model.) 2 Sheets—Sheet 1.

P. DIEHL.

SEWING MACHINE STAND AND TREADLE.

No. 306,469. Patented Oct. 14, 1884.

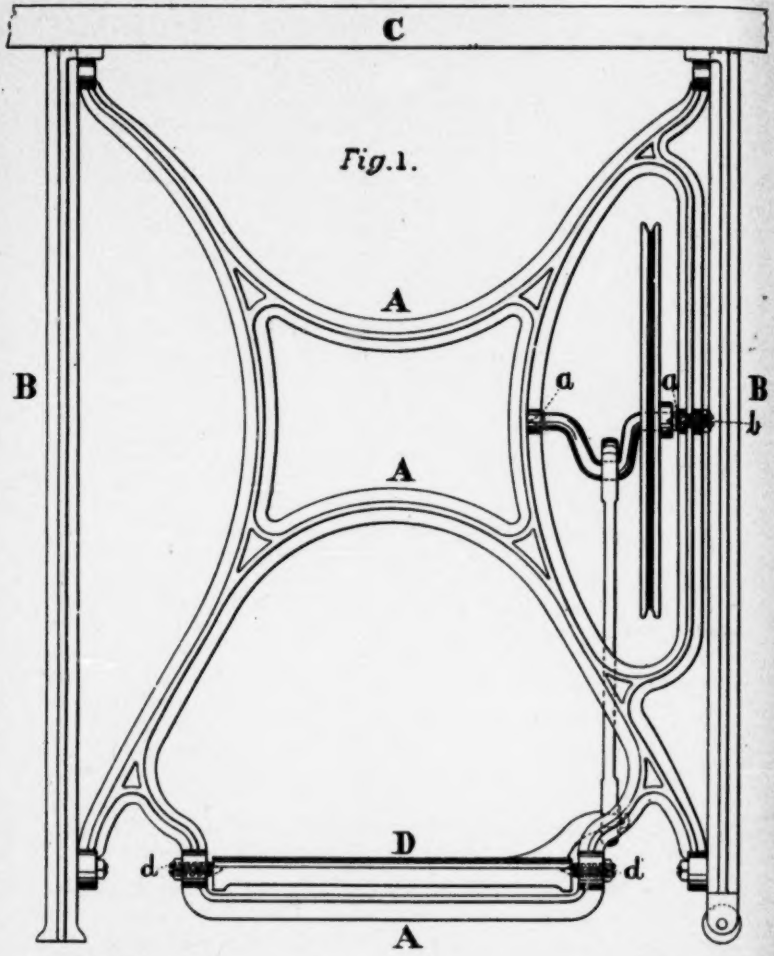


Fig. 1.

WITNESSES:

Chas. Ellis

Angelo Yoonan

INVENTOR

Philip Diehl

BY Sydney A. Barnes

his ATTORNEY

(No Model.)

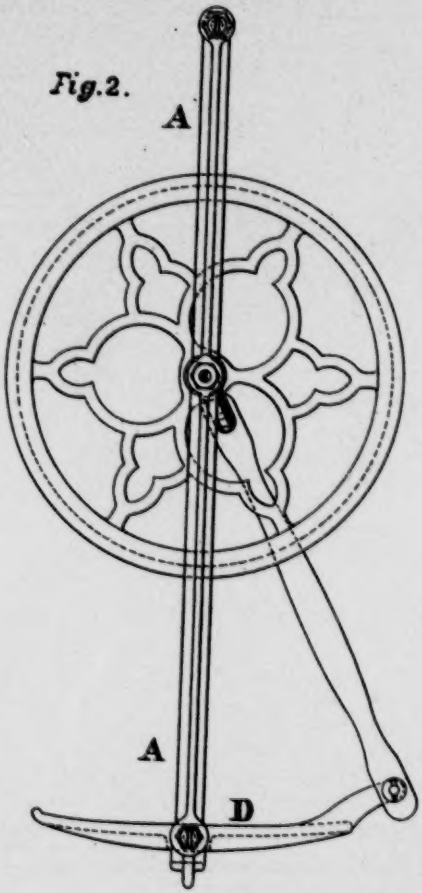
2 Sheets—Sheet 2.

P. DIEHL.

SEWING MACHINE STAND AND TREADLE.

No. 306,469. Patented Oct. 14, 1884.

Fig.2.



WITNESSES:

Chas. Klein

Angell Norman

INVENTOR

Philip Diehl

BY Sydney A. Bennett

his ATTORNEY

168 UNITED STATES PATENT OFFICE.

PHILIP DIEHL, of Elizabeth, New Jersey, assignor to the Singer Manufacturing Company, of New Jersey.

Sewing-machine Stand and Treadle.

Specification forming part of Letters Patent No. 306,469, dated October 14, 1884. Application filed May 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, Philip Diehl, of the city of Elizabeth, in the county of Union and State of New Jersey, have made an invention of certain new and useful improvements in sewing-machine stands and treadles; and I do hereby declare that the following is a full, clear, and exact description and specification of the same.

My invention relates to an improved construction of such sewing-machine stand; and its object is to secure a permanent and reliable support and adjustment for both the band-wheel and treadle and to preserve their respective relative positions, so that they will always co-operate to produce the best results with the least danger of friction or binding.

In the drawings, figure 1 is a face view of such a stand, and Fig. 2 an edge view of the brace within which I support both the band-wheel crank and treadle.

(Here follow diagrams marked pp. 166 & 167.)

C is the ordinary table-top of a sewing-machine; B, the upright legs or stand sides, and A the usual brace connecting the same and serving to stiffen and secure the frame, as well as to perform the specific and additional functions hereinafter explained. This brace is formed, substantially as shown, with a loop within which the band-wheel can act, and on the sides of which are provided conical bearings for the shaft which supports the band-wheel, and which is preferably bent so as to form a crank. To this crank is attached an ordinary pitman, which at its lower end is pivotally connected to an ordinary rocking treadle. This treadle is supported in the lower portion of said brace, which I prefer to make as shown, forming practically another loop, the lower end of which is the cross-bar on which the treadle is hung. This cross-bar may, however, be omitted and the treadle hung directly on downward projections from the brace.

My invention is shown as applied to a stand adapted for use in supporting and driving a Singer I. F. sewing-machine; but I do not confine myself to any particular form of stand, the essential part of my invention being the providing of supports for both the band-wheel and the treadle, which are integral with the brace, so that when said band-wheel, with its driving-crank and said treadle, have been hung within said brace and connected by a suitable pitman

their adjustment to and relationship with each other are practically permanently secured.

Means are provided for taking up ordinary wear in the band-wheel shaft by the cone-bearings *a a* and the screw *b*, and in the treadle by the conical pointed screws *d* acting in suitable bearing-recesses. By this arrangement any twisting or other alteration in the fitting or connections between the brace and the legs or between any of the several parts of the sewing-machine stand will neither affect the hanging, adjustment, or relationship of the said band-wheel and treadle, and, in fact, the lower driving apparatus of the sewing-machine is by my invention absolutely secured against any accident short of the breakage or forcible distortion of the brace itself. This brace, being built strongly, and preferably with a rib, as shown, is not at all likely to be injured in ordinary use or by ordinary handling.

I claim as my invention—

1. In a sewing-machine stand, a cross-brace having supports for both the band-wheel and the treadle integral with said brace.

2. In a sewing-machine stand, a cross-brace having supports for both the band-wheel and the treadle integral with said brace, and provided also with means for adjusting and taking up the wear of such band-wheel and treadle.

3. In a sewing-machine stand, a cross-brace adapted to connect the legs or side pieces thereof, provided at one side with bearings for the fly-wheel crank-shaft, and having a support at its base for the treadle, substantially as set forth.

4. The combination, with the cross-brace of a sewing-machine stand, of a crank-shaft and a treadle, both mounted in the said brace, substantially as set forth.

5. A cross-brace for sewing-machine stands, having at its base a cross-bar, combined with a treadle mounted in said cross-bar, substantially as set forth.

PHILIP DIEHL.

Witnesses:
A. D. HARTWELL.
A. D. PENTZ.

169 The COURT: This Diehl patent is the Singer Manufacturing Company's arrangement of the cross-brace and treadle, pitman, and band wheel, is it?

Mr. WHEATON: Yes, your honor. It is the same as Plaintiff's Exhibit "P."

The COURT: It is shown by the model Plaintiff's Exhibit "P," is it?

Mr. WHEATON: Yes, with the band wheel and treadle hung in the vertical frame.

Q. With how many of these different manufacture-s of sewing machines did you try to make a deal for your patent?

A. I think I wrote to all of them. So far as I remember now, it was to all of them.

Q. Was the Domestic machine one of those that were in competition with the Singer Manufacturing Company on the market during those years?

A. They had an office here, yes, sir. I remember that very distinctly.

Q. You say you wrote to all of them?

A. So far as I know.

Q. Did you write to them, telling them that you had the best stand in the world, and wanted to offer to deal with them for it?

A. I wrote them something in this style: "Having invented one of the most complete treadles that has ever been got up, practically consisting of but two pieces, the base and treadle, and working much easier and as noiseless as can be, and to make your respective machine most complete of any sewing machine in the mar-
170 ket, you should embody this improvement." It is something on that style.

Q. Did you succeed in drawing an offer from any of them for your patent?

A. I succeeded in getting them to praise my patent, saying it was a good invention, and thanked me very kindly for having called their attention to it.

Q. But did you succeed in getting an offer for any kind of a deal for your patent or for your invention from any of those companies?

A. No, sir, I did not.

Q. Did you make any of them any definite offers for the use of your patent?

A. No, sir, no more than I would like to have them adopt it in their respective machines, if they would give me a royalty, with the privilege of using it on all machines that I used, or sell it with the privilege of putting it on all machines that I sold, as I sold different kinds.

Q. Did you get an offer, on any terms whatever, for the use of your patent, from any of those companies?

A. What do you mean by that? Do you mean did any agent ever come to me and try to make an arrangement with me? Do you mean that?

Q. Yes.

A. Or do you mean that the head office corresponded with me as to an offer?

Q. I mean did any of these companies, either by agents or by letters, or in any manner whatever, attempt to make any arrangement with you? That is, did any of them offer you any terms upon which they would adopt your invention?

171 A. The Singer Company corresponded with me, and said as soon as the patent was out—it was out—and if they saw anything they wished to adopt about it, they would make proper arrangements with me, or arrangements with me; something of that kind. This was after the patent was issued.

Q. The date of that letter and the date of the patent are very close together, are they not?

A. The patent was issued on the 30th day of January, 1893, and

I corresponded with the Singer Company, I think the letter was February 8th or 9th.

Q. February 8th or 9th following, so they were very close together, the date of the patent and the date of the letter?

A. Yes, sir.

Q. After your patent was out, did the Singer Company ever make any kind of an offer to you for your invention?

A. No, sir—that is, the company direct, didn't. Is that what you mean? Or do you mean this man that came to Sonora, the agent?

Mr. MILLER: He asked you whether the company or the agents of the company did.

A. Well, one of the agents of the Singer Company was at Sonora. That is right.

Mr. WHEATON:

Q. Did you offer any terms to any of these different companies, on which you would allow them to use your invention?

A. This agent was trying to make some arrangements with me, this agent that I spoke of.

Q. I am speaking now about any of the companies other than the Singer Company.

172 A. I corresponded with all the companies, but received no reply, only as I stated, and this agent in Sonora, the agent that came to Sonora; he was at my house trying to make some arrangement to get the patent, and drew out a long document, of which I have a copy, which I refused to sign.

Q. Did you ever get a square offer for as much as a single dollar for the use of your invention, or for your patent from any of these companies that you have mentioned?

A. This man on his document had that I was to accept $10,000, if I mistake not.

Q. How is that?

A. He had on his writing that I was to get $10,000, and it was fixed in such shape that I did not like the whole business at all. It was not drawn in a business-like manner at all, and it was not as I understood it at all—it was not as he agreed with me at all. The writing was one way and the agreement was the other; he was to sue every company for $50,000 in every district.

Q. Who was that man?

A. His name was Dodd. I think that is the name.

Q. What was his business?

A. He claimed to be manager for the Singer Manufacturing Company, traveling manager; he styled himself as manager to me.

Q. Now, leave out the Singer Company——

A. (Interrupting.) That is what he said; he said that.

Q. No matter about that. We will drop that.

173 Mr. MILLER: I thought you would drop that.

Mr. WHEATON:

Q. Take all of these other companies all together, and did you

ever get a square offer for as much as $1 from any of them for your patent, or for the use of the invention covered by the patent?

A. I never put my patent on sale in that way at all. It was not on sale for a dollar; it never was.

Q. I say as much as a dollar; a dollar or more.

A. I never had an offer at all in money, only, as I stated just now, by this agent—not outside of that agent.

Q. You say his was not an offer in money?

A. It was a writing. Do you mean to say if a man come up with a dollar, and offered me a dollar in my office for my patent, I would take it?

Q. Did the Singer Company ever, in any manner or form whatever offer you any money consideration for the use of your invention?

A. If this agent had anything to do with it, as he pretended he had, that was an offer of money.

Q. I do not know anything about the agent.

A. I do not know either, except as he represented himself. I don't know what he was. He represented himself that way, and that is all I know of it.

Q. What became of Mr. Dodd?

A. The last I heard of him he was at Visalia. An attorney by the name of Holland told me he said that Cramer had an excellent patent, but the Singer Company had too much money, they would wipe him out yet.

Q. If that invention was worth a cent, why is it that you
174 could not succeed in getting some kind of an offer from some one of these several companies that up to this time had been selling sewing machines which did not have the treadle hung in the vertical cross-brace?

A. As a rule, sewing-machine companies will not buy patents until you have introduced your patent yourself and cut into their business, which I could have done, and they would have bought my patent quick enough. That was my mode of operation, and I would have succeeded just in that way, and been worth millions by this time. But inasmuch as they went to work and used my patent on their machines, in the very treadle that I had invented, and could get trade upon, they cut me out of all the trade as fast as they could.

Q. I am speaking of other companies, not the Singer Company; those that used their machines with the treadle not swung in the vertical cross-brace.

A. Yes, sir.

Q. Take, for instance, the Domestic as an example: The Domestic machine has never had the treadle hung in the vertical cross-brace, has it?

A. No, sir. That is correct.

Q. Yet that same Domestic machine has been on the market for years, selling in competition with the Singer sewing machine, which does not have the treadle hung in the cross-brace, has it not?

A. So far as I know, yes, that is correct.

Q. If your patent and the Diehl patent are the same, and there is such an advantage in your patent, why did not the Domestic Company need your patent, so that they could hang the treadle in the cross-brace, and more successfully compete with the Singer Company?

175 A. You must ask them as regards to that, why they didn't do it; I can't tell you that. Each company knows its own business or is supposed to know its own business. I know they saw some of my advantages, and so did all the companies, go and adopt some of the advantages, to some extent or other—all of them, in fact.

Q. Can you explain why there is not one of these companies that has wanted your patent or has used it, that were selling machines in competition with the Singer Company?

A. Can I explain why they didn't object to my patent?

Q. Why they did not make any attempt to get your patent?

A. I cannot.

Q. Suppose they did not believe that the treadle arrangement which is shown and covered in your patent was as good as the ordinary methods of hanging the treadle. Would not that be a reason why they would decline to make any attempt to get your patent?

A. I have not seen a man yet but what said that that was the best device in the way of hanging a treadle. I have not seen one yet. The companies, the presidents, secretaries, and managers, usually, are not mechanical experts and they take a device, as a rule, to their mechanics. If the mechanic says that is a good device, they will say, "Why didn't you get it up?" So the mechanic always says, "I can get up something better than that, and I will get something near to it." And that is his starting point of invention.

176 Q. You do know this, do you not, that not one single one of those companies that was selling in competition with the Singer Company, has ever hung their treadle in the vertical cross-brace?

A. At what time?

Q. From the beginning of the world up to the present time.

A. I do know that quite a number of companies have hung their treadle in the cross-brace.

Q. In the vertical cross-brace?

A. In the vertical cross-brace.

Q. What companies were those?

A. The American Company is one that hangs its treadle in the cross-brace. The Standard Company is another. The Crown Company is another. And others have come up as close as they could.

Q. Did the American Company ever hang the treadle in the vertical cross-brace?

A. Yes, sir.

Q. Except the machines in which you did it yourself.

A. No, sir, they did it themselves. I corresponded with them as to the whole of it, as to selling them the patent. They did not propose to buy the patent, but afterwards they went and infringed, and

are infringing today, and so is the Standard Company infringing today. But when you go back to the commencement, at the commencement they didn't pitch in right off. But I presume when they saw that the Singer was infringing, and I could not do anything with them, as they imagined, they thought they were at perfect liberty to infringe also—so I imagine—I don't know anything about that. But I know that they are infringing, and that they hang their treadle in the double vertical brace.

Q. Is the American machine on the market yet?

177 A. So far as I know, it is on the market. I have some, and I presume it is manufactured today. I do not know anything to the contrary.

Q. How long did you continue to be agent for the American machine?

A. I think the first machine I bought was in 1875 or 1876, and I have been purchasing agent ever since.

Q. And you have received these American machines, have you, with the treadle hung in the cross-brace, as originally made at the factory?

A. The treadle in the cross-brace they have never sent me a machine of. Whenever I sent to them, they did not send me that machine. But I went over to Coulterville, and I found them there. Then I notified the company that I should hold them responsible for damages.

Q. How was it with the Domestic? Did the Domestic ever hang the treadle in the cross-bar?

A. What do you mean by the cross-bar?

Mr. MILLER: The cross-brace, you mean?

Mr. WHEATON: The vertical double cross-brace.

A. I have never seen one, unless they do it in other territory. I have never seen one here, not in my territory—not to come to my notice.

Q. Are you familiar with the Diehl patent?

A. Yes, sir; perfectly familiar with it.

Q. Do you understand the particular combination which is described in that first claim of the Diehl patent, and that is this, "In a sewing-machine stand, a cross-brace having supports for both the band wheel and the treadle integral with said brace"?

178 A. I do not understand what you mean by a cross-brace, unless you put in the other word.

Q. By the cross-brace, I mean this cross-brace which is shown in your Exhibit "P."

A. I understand that is the vertical cross-brace. I understand that.

Q. The claim does not happen to use the word "vertical," but it refers to that brace. With that explanation, do you know the combination that is covered in that claim?

A. I do.

Q. Will you please point out, if you can, that combination in that patent?

A. The combination of the cross-brace and wheel?

Q. In this treadle, Plaintiff's Exhibit "D," Mr. Cramer, why did you have the trunnions cast with a sharp point to them at the end?

A. That is the way I made them.

Q. Does your patent show them that way?

A. I don't think my patent says anything about them. That is my privilege, I take it.

Q. Does not your patent show them square, and with the cushion?

A. Not that I know of. If it does, they made a mistake. I did not say anything about that, that they should make them square, or any other shape.

Q. Going back to the machines, Mr. Cramer. State whether or not you recognize this as the stand of the Crown machine?

A. I will have to look at it. (Examines model.) Yes, sir; that is a stand of a Crown machine.

179 Q. It has not the vertical double cross-brace, has it?

The COURT: Did you say the "Crown," Mr. Wheaton?

Mr. WHEATON: I asked the witness whether he recognized this as the stand of the Crown machine that he was testifying about.

Mr. MILLER: I do not know that he said anything about any Crown machine, further than that it was on the market.

The WITNESS: That was not the machine I referred to when I said the Bent machine. Bent is the one that sells the Crown.

Mr. WHEATON: You spoke of the Crown machine?

A. I referred to the Bent. Bent is the salesman, always was, ever since I knew him, on the Crown machine.

Q. Here is a Crown machine?

A. It was not that style that he sold.

Q. Which is the latest style, this or the one that Mr. Bent sold?

A. Well, I don't know which he sold. I notified him—I had a correspondence with Mr. Bent in 1883, informing him of the patent——

Q. (Interrupting.) Bring out your correspondence, if you have it.

A. I have it; yes, sir.

Q. We will put that in.

A. I have it, and I will bring it.

Q. In this Crown machine, the treadle is not hung in the double vertical bar, is it?

A. In this cross-brace?

Q. Yes.

A. No, sir, it is not in this cross-brace.

Q. When I say "bar" I mean "brace" every time. In
180 this Crown Machine, the treadle is hung in the legs, is it not?

A. No, sir, it is not hung in the legs.

Q. What is it hung in?

A. In a cross-bar. Let me look at that particularly. (Examines

further.) Yes, in a cross-bar, that is it. Yes, I have got one down at the office.

Q. That is hung on point centers, too, is it not?

A. Yes, sir; it is hung on point centers; so far as I can see, I think it is. Yes, I guess that is hung on point centers. See, it swings there like that (showing).

Q. Would you, or would you not, claim that, Mr. Cramer?

A. Claim that as an infringement?

Q. Yes.

A. Yes, sir. I do claim that as an infringement.

Q. On what ground?

A. Of getting a perfect alignment. That is a perfect alignment, so far as that bearing is concerned, so far as that bearing sets down there, but the bar itself works loose in the legs, as you see it there now. But so far as the treadle is connected with the bar, that is perfect alignment.

Q. But in other machines, old machines, the treadle was hung on the cross-bar, was it not?

A. On the cross-bar? No, sir. You see, there is a difference between a cross-bar and a cross-rod.

Q. In this Crown machine, what you call the cross-rod or cross-bar, I forget which you call that——

A. A cross-bar.

Q. Is not that a cross-rod?

A. Bar and a rod, there is some difference between them in
181 a sewing machine. The rod is usually round and the bar may be of different shapes. A bar may be octagon or hexagon, or flat.

Q. In this Crown machine, the cross-bar is not cast solid with the legs, is it?

A. Is not cast solid with the legs?

Q. No.

A. You mean to say the legs and cross-bar is cast in one piece?

Q. That is what I mean by their being cast solid.

A. The cross bar and the legs cast solid? No, sir.

Q. And yet you say that there is perfect alignment in this Crown machine?

A. A cross-bar is not solid with the legs—that cross-bar is held by the legs and the point centers are on that cross-bar. In other words, you take that cross-bar off, and then you can put the legs on on each side of it, and then you put on your outside nut. It answers the purpose of the tie-rod, at the same time.

Q. And in this Crown machine, the treadle is not hung in the vertical cross-brace, is it?

A. In the vertical upright cross-brace? No, sir.

Q. There is, then, necessarily a space between the bottom of the cross-bar and the top of the treadle, in which everything is supported by the legs, is there not?

A. On that there is a separate—what do you mean? That there is something else to stiffen it besides the cross-bar? Is that what you mean?

Q. No. I mean that the treadle is so connected with the legs that if the legs would get out of line, that it would pull the treadle out of line.

A. No, sir; oh, no.

182 Q. Is not the treadle in this Crown stand——

A. (Interrupting.) It is in one piece there.

Mr. WHEATON: There has been so much said about this Crown machine that I will put it in evidence, if your honor please, and ask that it be marked Defendant's Exhibit No. 2.

Mr. OFFIELD: That is in evidence in a deposition.

Mr. MILLER: Not in this case.

(The machine referred to was here introduced in evidence and marked Defendant's Exhibit No. 2.)

Mr. WHEATON:

Q. In this Crown machine, the cross-bar or cross-brace in which the treadle is hung, as well as the treadle itself, are both supported in two cone screws passing through the web of the legs of the machine, are they not?

A. They were hung both on two point-center bolts or trunnions, just as you wish.

Q. And still you say that you would claim that this was an infringement of your patent?

A. I do, sir.

Q. Simply because it has a perfect alignment?

A. Yes, sir.

Q. If that Crown machine has a perfect alignment, does not that prove that it is possible to get a perfect alignment when the treadle is suspended in the web of the legs?

A. When the treadle is suspended in the web of the legs?

Q. Yes.

183 A. No, sir, not in the legs. When that treadle is suspended in the web of the legs that might do, but not others.

The COURT: How is a perfect alignment secured, then, in this machine?

A. It is on one piece of casting, that bar, and each side has a conical screw. You see, it is on one piece, and they cannot get out of line when they are in line on that bar. The difficulty in that is you have to have an extra brace to stiffen the frame with that, an extra one on the side, as you see on that, to stiffen it, and that extra brace has to be in union with the bar. If that was a little wider or a little narrower it would not do at all. So it is quite an expense to mill that down to make it in union with the bar. That is the objection I had when I got up that patent.

Mr. MILLER:

Q. Which patent do you mean?

A. When I got up that device right there.

Mr. WHEATON:

Q. The new Crown device?

A. A device like that. I did not call it the Crown at all. A device like that. That was my objection to it, it had to have an extra piece to stiffen the frame.

Q. Is not the brace that stiffens this frame even lighter than it is on the ordinary machines?

A. I don't know about that. The brace running down only two-thirds or one-half of the distance might reasonably be expected to be a little lighter. Yes, I should think so.

Q. Is it not a fact that the lower end of the double vertical brace in this Crown machine does not come within six inches of the treadle?

A. I have not measured it. I could not tell.

184 Q. I am holding the rule there, and it shows it.

A. I will take your word for it being six inches, or five.

Q. And still you say that infringes your patent, that it calls for——

A. (Interrupting.) I do not say it infringes the patent at all, that vertical brace. There is nothing of that vertical brace at all that infringes my patent, but I say the perfect alignment does.

Q. Would not that alignment be just as perfect if we took out the cross-bar entirely and hung the treadle just as it is hung now on the ends of the point centers, the point centers passing through the web of the legs?

A. And have no tie-rod, no rod below there to hold it?

Q. Yes, without any rod there at all.

A. No, sir; that would not do.

Q. Would not the alignment be just exactly as it is now?

A. No, sir, it would not. It would be on two pieces then.

Q. The point centers would go through the web exactly as they do now, would they not?

A. Certainly.

Q. And instead of supporting both the cross-bar and the treadle, they would support the treadle alone, would they not?

A. They would only go through the legs and not go through the bar at all; is that your idea? That would not be in perfect alignment.

185 Q. The point of each one of these cones would be exactly where it is now, would it not, in the end of the treadle?

A. Yes, sir, they would be in the ends of the treadle; that is very true.

Q. Not only in the end of the treadle, but the ends of the treadle would be in exactly the same place that they are now?

A. But there would be nothing to steady the end. There would be only two pieces, and the vibration of the legs——

Q. (Interrupting.) Now, answer the question. Does it or not——

A. (Interrupting.) Let me illustrate it to you.

Q. That is something anybody can understand.

A. I understand it, and have understood it for a great many years, Mr. Wheaton.

Q. Is it a fact that if I take out that cross-bar entirely, as I have here taken out one end of it, that the treadle would be supported on the end of that cone in just exactly the same position that it would be supported on it when the cross-bar would be replaced?

A. It would not.

Q. In this other end the treadle is suspended on the point of the cone in its place, is it not?

A. Yes, sir. That is on that end; that is correct.

Q. The left-hand end of the treadle is supported on that cone, and is held there by the point of the cone on the opposite side, is it not?

186 A. Yes, sir. I never saw a treadle hung that way in my life, only one end on the cross-bar and the other one on the leg. I don't think you could sell a machine like that.

Q. If this end of the treadle is in exactly the place that it would be if this cone on the other end passed through the bar, must not the point where the cone holds this when the bar is taken out, be in exactly the same position that it was with the bar in there?

A. No, sir. If I understood you right, you mean with this in this way (showing)?

Q. I mean this; at this point, where this cone suspends the treadle, it is just exactly the same spot, the same location in every other way, when that bar is not in as it is when the bar is in?

A. While you hold it that way, yes, but when you let go it won't be.

Q. It will come away then?

A. Why, certainly, that side will come away.

Q. Suppose that these cone centers were just simply threaded, that is, the holes were threaded that they passed through, and they were put in the same position they are in now?

A. Threaded to the leg—do you mean that?

Q. Yes, threaded to the web of the leg.

A. Give me two pieces, and I will illustrate that to you. May I do that?

Q. Would it not be exactly the same alignment that it is now in?

A. No, sir.

Q. Just show why it would not, if you can.

187 A. You take this out entirely, and you put a thread on that, and when the leg sets a little this way, or that way (showing), those points are thrown up and down, because they are on two pieces, and they are in a constant position when they are on two pieces, that is likely to throw that out either one way or the other, continually. I have tried that, experimentally, a good deal. In that construction your legs would have to set perfectly square, perfectly at right angles with each other. If it was a little out of right angles in any place on these points setting that way, they would set this way or that way (showing). Do you get the idea?

Q. Would not they do it just the same here?

A. With this construction?

Q. Yes.

A. No, sir, because this is on one piece. The thread is on this one piece. This leg, you see, is loose in here. You see, if this sets one way or the other, that it does not disarrange that in the least. It does not do it, nor can it do it. You can set that leg around until it will be probably an eighth of an inch out—that is sometimes done in setting up a machine. But the difficulty is, that this has to be just the same width as that, otherwise there is a disarrangement of the whole.

Q. That is the case with all machines, is it not? They have got to be put together properly, fitted?

A. Some have hardly any fitting, while others have a great lot of fitting to be done.

Q. What is to hinder these legs getting out of place, just the same, whether that cross-bar is in there or whether it is left out?

188 A. What hinders the legs from spreading apart?

Q. From getting out of place, one way or the other.

A. I don't know what you mean by that.

Q. You have described it, talked about the legs being out of place here. Of course, I don't believe anything in that idea.

A. Let me show you. That holds your bar (showing). This is the jamb nut on that, and it makes that perfectly solid. That prevents it from going apart. So that makes a jamb nut, and you first adjust that, and when you get that right, it makes a jamb nut, and makes that perfectly solid. There is nothing to hinder it from going apart.

Q. Yes; that is all very easy. Now, suppose that those legs get out of place, won't it throw any of those points out of place at all?

A. No, sir. The thread is on this. It does not make any difference. This rod can be taken out, and you can twist the legs any way you want to, and it does not affect the rod.

Q. Would it not affect the rod if the rod is in there?

A. That is not a rod; it is a bar.

Q. Well, a bar.

A. This is the bar, and if these are twisted like that, it does not injure those points at all. You twist them like that. The bearing is upon this, and not upon the leg. This simply makes a jamb nut after it is adjusted, to hold it.

Q. Where is that exhibit that you put in which had cone collars on it?

A. I don't know where that is now. It is here somewhere.

189 Q. In that Exhibit "E," which you say was one of the old style, there was a bar that went through the web of the legs in both cases, was there not?

A. Yes, sir; that is correct.

Q. And had the shoulder come against the webs on the inside?

A. Yes, sir.

Q. And at the same time a thread and nut on the outside, so as to secure them and bring them tight?

A. Yes, sir.

Q. The same as is done in this Crown machine?

A. How is that? Yes, exactly. One is held by two nuts, and the other is held by the tie-rod with the journals on each end of the tie-rod. That is correct.

Q. In this Exhibit "E," the treadle itself was hung on the bar, was it not?

A. Bar? I don't call that a bar; I call that a rod.

Q. We will call it a rod, then.

A. That is a rod.

Q. The treadle was hung on that, was it not?

A. On the rod; yes, sir.

Q. So, in that case, the treadle was quite as independent *of the legs as in the* case of the Crown Standard, was it not?

A. Oh, no; not at all.

Q. Why not?

A. On this it is hung independent of the legs, on this one here in the Crown. This connects right with the legs, and there is a big difference there. This goes right in there, through there (showing). Do you see the difference? There is a big difference there. The action of this affects the leg right direct, ten times more than that.

Q. I cannot see why.

190 A. The action of the foot makes that loose continually, and that is a jamb nut, you see; somewhat different from a set-screw.

Q. In Exhibit "E," the rod has jamb nuts on the outer end, has it not?

A. No, sir. That is not a jamb nut. They do not call that a jamb nut.

Q. What is it?

A. A jamb nut must first have a screw into something, and then a nut on the outside of that screw. That makes a jamb nut. If that had a thread on, with a thread going through the leg, then the outside nut would be a jamb nut.

Q. Whether a jamb nut or not, it holds it in place?

A. The difference is that that is simply a smooth journal in there, and in such a case the nut is more likely to get loose.

Q. There is a difference?

A. Yes, sir, a big difference.

Q. But so far as its being fastened in the legs and making the treadle entirely independent of the action of the legs, I cannot see any difference.

A. You can't?

Q. No. Can you show any?

A. The foot is upon the bar, and the vibration of that affects the legs to some extent. The vibration, the constant bending of that rod under the foot there, affects it. I have had them bend considerable and then they get loose, the nut gets loose, and the legs spread.

Q. We are trying to get at the effect on the treadle of the

191 legs being out of place. You are now reversing it, and talking about the effect on the legs of the treadle. Suppose this rod of Exhibit "E" was fastened through the opening in the legs of the Crown machine, and the leg should be twisted one way or

the other, could it twist the rod of this machine any more than it twisted the bar of the Crown machine?

A. Would it twist the rod?

Q. Will the twist of the legs throw the bearings of the treadle out of alignment?

A. The imperfection of alignment is caused right there (showing). These cones are loose upon the rod. Those are cones and set-screws. They have been called point centers, but they are not point centers. These are collars, and not point centers—cones and set-screws. These are the set-screws (showing). I do not mean by *set-screws, point centers. That is to say, these are point centers.*

Q. We all know what these things are.

A. But things ought to be called by their own names, so I like to have them called in that way.

Q. Then, what in the world did you call those things trunnions for?

A. When they are in their place here, they are trunnions. When they are out on the road, they are not trunnions, because they make no bearing.

Q. What is that you say in your patent has to be kept in alignment?

A. What has to be kept in alignment?

Q. Yes; and what alignment is it you claim?

192 A. The treadle hangs in the double vertical brace itself there, and there is no such thing as getting it out of alignment. Any inexperienced person can put in that treadle.

Q. Getting what out of alignment?

A. The treadle.

Q. Out of alignment of what?

A. With itself.

Q. That is, that the bearings of the treadle have got to be in line with each other?

A. Yes, sir; the bearings must be in line with each other. In other words, they are on one piece, and heretofore they were on two pieces, like that (showing). Before the event of my invention, the bearings were on two pieces, and on devices like this, and the knife-edge bearings, and like the other model that is here, the pieces were fitted on there with knife-edges. This was set in this way, and they turned over, and they would hitch like that, and if these cones are not set perfectly like that, they are out of line when they are brand new. They are loose, and once they are set—I don't know but what I am learning you how to adjust this, but that doesn't make any difference, because I will never use them any more. You see, these cones are loose on there, and the action of the foot makes them loose continually, and if you tighten them tight, it would even bust the cone, sometimes. Then you have got to take the whole machine apart and put on a new one. I have done that lots of times.

Q. What I want to know is this: When this treadle and 193 other similar treadles are put on a straight rod, all fitted and true, how could the bearings of that treadle get out of alignment with each other, as long as the bar remains?

A. By getting loose continually, and shifting from side to side, on this side or that. I don't call it alignment when a rod flops on there.

Q. Any machine has got to be kept in order?

A. Yes, sir, but some take constant keeping in order, while others do not. There is a big difference there.

Q. Would not the nut on this rod in Exhibit "E" keep its place just the same as a jamb nut would?

A. No, sir. A jamb nut has a thread first in a part of the structure and then the nut goes on, and they call it a jamb nut. That is not a jamb nut, it is simply a nut at the end of the journal.

Q. It is not a jamb nut, but it is a nut that tightens right up against the outside of the legs, is it not?

A. Yes, sir, and the action of the foot makes that loose, continually. That is my experience, and I have been in the business thirty-five years or more.

Q. Do you mean to say you cannot keep those nuts tight?

A. I say they get loose to such an extent as to be an objection.

Q. Now, take your own patent. You say the legs are only held together by this lower rod?

A. Yes, sir; that is correct.

Q. And your patent explains that as going from one leg to the other and having the nuts on the outside?

A. Yes, sir.

194 Q. What is the reason those do not get loose the same as they do on this machine?

A. Let me explain it to you. This sets upon the tie-rod, and this other one sets upon the double vertical brace and has no connection on the tie-rod whatever. See the difference? This is on the double vertical brace in that respect, and in the Diehl patent it is the same, and hence it has no effect whatever on the tie-rod.

Q. Suppose the screws get loose on the ends of the tie-rod in your machine?

A. There is nothing to make them loose. There is no action that can make any looseness to it.

Q. In this Exhibit "E," the treadle oscillates on the rod, does it not?

A. The treadle oscillates on the rod; the rod itself is rigid and does not oscillate at all unless it gets loose. You see, these holes are generally cast in there, and the rod is always more or less loose in those holes. And the leg is loose, and hence the action upon this nut.

Q. What is the result of the screw getting loose on your tie-rod, on the outside?

A. I never knew them to get loose. I don't see how it could do any damage, if it did. The treadle would not fall out; it would be in the brace.

Q. That would be the case with Exhibit "E" also, would it not, that if the nuts did get loose, the rod would still be in place, and the treadle in place also?

A. If the legs got away, this would be on the rod—if they spread

or got loose. But if this gets loose, it gets a binding from the
195 pitman and the band wheel continually. You see, this has to be in perfect alignment that way (showing). If they get loose from the action of the foot, they are either moved a quarter of an inch, or an eighth of an inch, one way or the other. Then the machine-repairer comes along, and he sets them up tight, and then the machine runs hard, and the woman who owns the machine says, "My machine runs too hard," and she simply trades off a good machine because of that difficulty. There are lots of poor women throughout the world just working for sewing machines, just in that kind of a way. It is an imposition.

Q. Has your machine saved the lives of any great number of women, do you think?

A. It has got them very highly pleased with them. It is not a life-preserver; I don't claim it to be.

Q. Do you pretend to say, as a fact, Mr. Cramer, that there were no machines in which the treadle was hung in the webs of the legs, in which those two bearings of the treadle were in perfect alignment?

A. Yes, sir, I mean to say that.

Q. All of the mechanics, up to the time of your invention, never accomplished the result——

A. It never was accomplished until I accomplished it.

Q. I wish you would wait, Mr. Cramer, until I have finished my question. Do you mean to say that, up to the time of your invention, no machines had been made, that there were no mechanics capable of making a sewing-machine stand, in which both bearings of the treadle were put in perfect alignment with each other?

A. I don't know about the capabilities of mechanics that
196 should put it in. I have not examined that, and I could not tell you anything about the capabilities of the mechanics. They did not get to it; that is all I can say.

Q. Do you mean to say that up to 1880 there had been no treadles put in sewing-machine stands in which both bearings of those treadles were in perfect alignment with each other?

A. Yes, sir; I mean to say just that.

Q. And on that account you claim to have discovered perfect alignment?

A. Yes, sir; as perfect as can be.

Q. Up to that time, nothing in the shape of perfect alignment of these two bearings of the treadle could be found, outside of the dictionary?

A. No, sir; I have not seen a single perfect alignment.

Q. We were speaking about the point of the treadle that you have brought in here. Please look at your patent, and see if the treadle is not cut off square, so that it comes against the block and cushion?

A. I did not make any claim to anything square.

Q. See whether it is so or not in the patent.

A. Well, I don't know. I don't know what skill the man used. I never made any claim that the treadle should be square, or of any

particular shape; that is, as far as the ends of it are concerned, that they should be square, or that they should be just so. I made no mention of that, only that I know that they remain in the brace, and that is all I claim, whether made square or not.

Q. Unluckily, you have not claimed that in your patent.

A. Claimed what?

Q. The treadle in the brace.

197 A. I do claim that; yes, siree; and that I use the holes for the bearings, just like the Diehl patent.

Q. You claim that in combination with the treadle provided with these trunnions. Hanging the treadle in the brace is not covered by your patent as an element by itself. What was the object of casting these points on this Exhibit "D," instead of having the ends square?

A. The object? Why, it is nicer to have them that way. Patentees generally make things as nice as they can.

Q. What would be the effect of this point against a leather cushion?

A. There is no working against any cushion. It is simply to stop that malicious noise that a person might make with it.

Q. Are you not altogether off on the noise of the treadle of the machine?

A. No, sir, I am not. I know that a person can take a treadle and shake it like that, and make a dreadful noise. There is a difference in the treadles. That one you have got in your hand there makes a dreadful noise. That is, as they get loose, they flop up on that bar, and they go bangitty-bang, bangitty-bang. When it is in perfect order, they keep a while; yes. You can tighten them up every now and then, so they will do for a while.

Q. In this letter to the Singer Manufacturing Company, recommending your patent (Plaintiff's Exhibit "H"), you say it does away with cones and set-screws and makes the machine run a great deal lighter?

A. Yes, sir.

198 Q. And in the Singer machine, for hanging the treadle, they do not use anything else but cones and set-screws, do they?

A. They do not use cones at all. This is a cone. You see, it has got a hole in it. They do not use anything like that on it, a cone, or a collar. They use point centers. There is a big difference between a cone and a point center. The cone is the collar that goes upon the rod, and is tapered on the end. That is a cone (showing). The point center goes to a point. There is no point on that cone.

Mr. MILLER: Just hand that over to the jury, and let them see what it is you refer to as a cone.

The WITNESS: The cone has a point there (showing).

A JUROR: That is what you call a cone, is it?

A. Yes, sir.

Mr. MILLER: That is what is called, in the sewing-machine art, a cone?

The WITNESS: It has a hole in the center, and it tapers on the

side. The point center is a point. There is a difference in them. That is a point, and that goes into something, and it is a point center.

Mr. WHEATON:

Q. Is not the point of this Plaintiff's Exhibit "Q" a cone?

A. No, sir.

Q. What is a cone?

A. It is a collar, tapered on one end, that goes over a rod.

Q. Can you find that in any mechanical dictionary?

A. I am not the inventor of mechanical dictionaries. I know that in sewing machines all over, the agents all over, call that a cone.

199 Q. Do they not call this Exhibit "Q," the point of that, a cone?

A. I never heard it called a cone, never. I do not know who would call it that. I call it a point-center bolt, just what it is.

Q. Did you not testify in your direct testimony here, in answer to Mr. Miller's question, when you were showing what had existed before, that such things as these were cones?

A. No, sir.

Q. Did you not testify that treadles had been hung upon cones before that?

A. These are the ones. Certainly, I did testify to that, and these are the ones.

Q. Those are the collars, are they not?

A. They are collars, and they are called by sewing-machine men cones. I never heard them called by any other name. And these are the set-screws I spoke of there, that pivots on the bar like that, and they rock, and that is what makes them loose so much.

Q. Prior to your invention, these point centers were in use for swinging treadles on sewing machines, were they?

A. Prior to my invention, they were used, point centers were used, but not on vertical braces at all. They were used on legs. They were used on the Florence machine, on the Wheeler & Wilson, where the arm works up and down like that—there is two point centers like that that gives the oscillating motion.

Q. Did any of them hang the treadle on point centers prior to your invention?

A. Yes, sir.

200 Q. Then, you did not mean to tell the Singer Company that you got rid of the use of point centers by your invention, did you?

A. No, sir; oh, no.

Q. Then, there was nothing in this to warn them against the use of point centers in their machines, was there?

A. No, sir. Point centers can be used anywhere. They are public property.

Q. That is what the Singer Company are using, are they not?

A. Yes, sir. I don't sue them for using point centers. I sue them for hanging the treadle in the vertical brace.

Afternoon session.

MARCH 30.

Cross-examination of HERMAN CRAMER resumed.

Mr. WHEATON:

Q. Mr. Cramer, I will read you the definition of a cone, copied from Webster's Dictionary. It is as follows: "Cone.—A solid body generated by the revolution of a triangle about one of its sides, but having a circle for its base, and its top terminated in a point or vertex." Taking that as a definition——

A. I don't take that to be true, in sewing-machine terms—it is not true in sewing-machine terms.

Q. Supposing you take Webster——

A. (Interrupting.) We don't take Webster. We take the sewing-machine price-list, and see that it is called there.

Q. Taking Webster for a definition, are the points of these screw-bolts cones?

201 A. I don't know anything about Webster's definition. I call them point centers.

Q. You have heard of Webster?

A. Yes, sir; I heard there was such a man as that, but he is not an authority over everything in the world. He is the man that has put language into frame, to the best of his knowledge; but there are new words added to language from time to time, that he knows nothing about.

Q. Taking Webster's definition, is not the point of these bolts a cone?

A. I don't see why I should call them cones, when they are point centers, and when I make a distinction between cones and point centers. I don't see why I should call them that, because Webster calls them that way. They are not called by sewing-machine men that way.

Q. You do not accept Webster as an authority?

A. I have nothing to do with Mr. Webster.

Q. I have thought, in a good many of your definitions, that that was so. Going to your patent, you say this, commencing at folio 55: "Pieces of leather, *f*, or other soft material, cover the top and end of each trunnion, to serve as cushions to keep the same close in its bearings, to prevent the noise which would result were the trunnions permitted to bounce and thump endwise, when the treadle is in motion."

A. Yes, sir.

Q. Now, those pieces of leather, F, or other soft material, is not used in the Singer machine, is it?

A. No, sir; not that I know of.

Q. Have they got in any equivalent of it there?

A. Not that I know of.

202 Q. Then that portion of the patent is not used in the defendant's machine, is it?

A. No, sir.

Q. Then the defendant does not use your means for preventing

the noise, which would result were the trunnions permitted to bounce and thump endwise, when the treadle is in motion.

A. Not use my means of preventing the noise? Why, certainly they do. They have their treadle on point centers. That prevents the noise.

Q. But that is not your means, is it?

A. No, sir. Those blocks are to hold the treadle, to prevent you from taking it up like that, or shaking it like that (illustrating). That is what they are for. Children want to play with it, or any one wants to do mischief and make a lot of rattling, you could not do it. The patent says, "if they were permitted," but you need not permit them.

Q. But what you have put in here is a specific means for preventing a noise that would result—"which would result were the trunnions permitted to bounce and thump endwise, when the treadle is in motion."

A. Yes, sir; that is, if they were permitted to do that.

Q. The idea is this: That in your construction of that treadle bar, the knife-edged trunnions, that if you left out the cushion above, and at the end, that your treadle would thump and bounce endwise?

A. No, sir; it will not do that, unless you permit it to do that. The word "permission" is in there.

Q. You swore to these specifications, did you not?

203 A. Yes, sir; and I meant them in spirit as I meant them. I did not mean them any different. It is a permission there. They were permitted to bounce endwise. If you hold that treadle up, you permit it, or you do it purposely. That is a permission; if you are permitted to do that.

Q. The idea here, is it not, is that if you left out the leather, F, or some other soft material in place of it, over the top and end of the trunnion that then the treadle would be permitted to bounce and thump endwise, and so forth?

A. No, sir; unless you cause it to be so.

Q. Did you ever use one of your knife-edge trunnion treadles without putting in the cushion and block?

A. Yes, sir.

Q. Did you do it before you took out your patent, or applied for it?

A. Yes, sir.

Q. Did you find it worked just as well without that cushion as with it?

A. Just as well.

Q. Then what did you put the cushion in your patent for?

A. For just what I stated; so that one would not be so easily permitted to do that, if you could do without them.

Q. It costs something to put that cushion and block in there, does it not?

A. About a cent or two.

Q. Some trouble, besides?

A. No, sir; it takes just a piece of broomstick, a wood block;

you can take a broomstick and saw it. All these models are a piece of broomstick. It costs hardly anything.

Q. You say in your patent, "My invention relates to im-
204 provements in the bearing of sewing-machine treadles; and it has for its object to provide means, first to keep the treadle bearings rigidly in line, and at a fixed distance apart, to avoid friction, and second, to make its movement in use noiseless."

A. Exactly.

Q. Was the use of that cushion and block any improvement, or not?

A. No improvement in its motion, whatever. It is just for the purpose as I stated there.

Q. What is the improvement that is created by the use of the cushion and block?

A. If you have no cushion and block in there, you take up the machine like that (illustrating); the treadle would be to one side, like that; or if any one wants to go and shake it, like that (illustrating).

Q. They never do that while using the machine as a sewing machine?

A. No, sir; but I have seen you do it here, once.

Q. This reads: "Second, to make its movement in use noiseless."

A. That is correct.

Q. Does it do that?

A. Yes, sir—do what? I did not understand that.

Q. That by the use of the cushion and block, you make the movement of the treadle noiseless, while the machine is in use.

A. Where do you read that?

Q. What I read was folio 10 to 16, in the first column of your specifications.

A. "My invention relates to improvements in the bearings
205 of sewing-machine treadles; and it has for its object to provide means, first, to keep the treadle bearings rigidly in line, and at a fixed distance apart to avoid friction."

Q. What is the rest of it?

A. "And second, to make its movement in use noiseless."

Q. Have you got anything in your patent that makes that treadle movement noiseless, except that cushion and block?

A. It does not make any noise. I would not say not any noise. Any machinery makes a little noise, so that you can see that a machine moves. A watch makes a little noise, a little ticking, but that is not what is commonly termed noise.

Q. Then, there is no meaning at all to those two parts, one in which you say the object of the improvement is to provide means, first, to keep the treadle bearings rigidly in line, and at a fixed distance apart, to avoid friction, and second, to make its movement in use noiseless, and other commencing at the beginning of the next column where you say, "Pieces of leather, F, or other soft material, cover the top and end of each trunnion, to serve as cushions to keep the same close in its bearings, to prevent the noise which would result were the trunnions permitted to bounce and thump endwise, when the treadle is in motion."

A. It is just for the purpose I intended it. There is no blank there. It is just as I intended it. It is the doctrine of permission. If you are permitted to do that way without the blocks, you can be permitted to do that. With the blocks, you have not got the advantage of it.

206 Q. Did you not intend, when you swore to these specifications, to make the Patent Office understand that, without that cushion and block, that the trunnions would bounce and thump endwise when the treadle was in motion?

A. Make the Patent Office understand?

Q. Yes.

A. That it would thump endwise? Here it says, "if they be permitted"—permitted.

Q. What is there that does not permit it?

A. Permit it?

Q. Yes, in your patent.

A. You are permitted to do it. You want to do it. You are permitted to do it. In other words, were the blocks not there, any one that is in the same business would say, "Just see how loose that is." He would not sit down and work it like a man should do, but he would just take and shake it.

Q. There is nothing to prevent the treadles from lifting up at each end if you took that block and cushion out?

A. No, sir; that is it; when you take the blocks out, you can lift the treadle right out.

Q. The treadle may lift at each end?

A. No, sir; it does not lift voluntarily, at all. You can lift it.

Q. There is plenty of space there to lift up each end, if you take the block and cushion out?

A. It is all one thing. You have got it divided now.

Q. And as shown in your patent, you make the opening through the lower end of the double vertical brace far enough up and down so that the treadle will pass through it endwise, have you not?

207 A. No, sir; not endwise. What do you mean by endwise? Throw it to one side of the leg? I don't know what you mean by endwise.

Q. I hope I do not have to go to Webster again to have you know what endwise means.

A. I did not know but what you had some authority for that.

Q. At the lower end of the first column of your specifications you say, "The bearing holes in the brace are formed in the long vertical loops to permit the entrance of the treadle."

A. Whereabouts are you reading now?

Q. In this figure 2, you show the long vertical loops.

A. Yes, sir.

Q. That is long enough up and down so that by turning the treadle in a vertical position, you can shove it through that opening?

A. You move it a little to one side, and then you lift it out. That is the way it is done.

Q. Is there anything of that kind in your patent?

A. Anything of that kind? I did not think it was necessary for me to specify in the patent that I should have a patent in a particular way of the form of my bearings. I did not know there was anything like that in existence.

Q. In the patent you show the end of the trunnion, do you not, the knife-edged bearings?

A. Yes, sir, the treadle rests in the lower end of those openings of the vertical brace.

Q. In your specifications, you describe the block surrounded by the cushion leather, or other soft material, as filling the space over the trunnion of the treadle through the vertical brace, do you not?

208

A. Yes, sir, I do, exactly. You fill up the Diehl hole, too.

Q. In your figure 1, you show the treadle reaching very nearly across the distance between the bottom legs of the vertical brace do you not?

A. I did not give them any dimensions of how long it should be, only that the bearing is upon the vertical double brace.

Q. I am only asking you what is shown in your patent.

A. You can construe it just as you are a mind to. That is a drawing of the patent. If you construe that——

Q. I am not construing it. I am asking you to construe it.

A. That the treadle runs through a certain distance? I cannot account for your construction of that.

Q. Is not the distance shown in this drawing——

A. (Interrupting.) I have got no patent on any distance, how far I should have that in, or how little I should have that in.

Q. Have you come to a stop, Mr. Cramer? Is not the distance between the edge of your treadle and the inside of the leg of the vertical brace less than the width of the vertical brace itself, as shown in figure 1 of the drawings?

A. I do not know anything about how you construe that.

Q. You can look at that drawing and see.

A. The treadle hangs in a double vertical brace. Now, whether Mr. Wheaton can see any space in between there, I don't know. I don't see any space.

Q. Can you or can you not? You have got your glasses on.

209

A. I have got my glasses on, but I do not see there is anything in that reading there that gives any space.

Q. You see the drawing of figure 1, do you not?

A. I see the drawing of figure 1.

Q. And in the reading it says that "A represents the treadle, provided with the usual pitman connection by which to run the sewing-machine wheel." You find that there?

A. Yes, sir.

Q. Now, in this drawing, figure 1, you find the letter A, representing the treadle, do you not?

A. Yes, sir, that is correct.

Q. Now, you see where the edges of the treadle come in that drawing, figure 1, do you not?

A. The edges of the treadle in figure 1, if I see this right, comes pretty near to the end—pretty near to the end.

Q. Is it not so close to the end that you could not shove that treadle endwise far enough in one direction to let the opposite end come out of the opening that it rests in?

A. Shove in far enough to one end?

Q. Yes.

A. I don't know what you mean, Mr. Wheaton.

Q. Supposing you wanted to take out that treadle.

A. Do you want to see me take it out—the treadle?

Q. No. I am talking about your patent, you know. You seem to understand everything except your patent.

210 A. No, sir; I understand my patent perfectly well, only you are trying to construe it your own way. You cannot get me into a lie, if you try all day. If you try to get me to tell you the truth, very well.

The COURT: Proceed with the truth, then.

Mr. WHEATON:

Q. Now, Mr. Cramer, to cut it short, when you take out this large block, and leave that long opening shown in figure 2 of your patent, and described in the specifications, what is there to keep the bearings of the treadle in place or in alignment?

A. The natural gravity of the treadle, and your foot being on the top to work it. That is all.

Q. And that, you think, with all that room for the treadle to bounce and thump endwise in——

A. I did not tell you that, that I would not use the block at all. You asked me if I kept the blocks out. I answered that.

Q. You have proved that the defendant does not use the blocks or the cushion?

A. I did not say any such thing, that I did not use the block, but there are machines that I did not use the block on.

Q. I am talking about the defendant. You say the defendant does not use that block?

A. Oh, the defendants. They do not use the block.

Q. Do you undertake to say, when this block is taken out which the defendants do not use, and you claim that when that is taken out, that the defendants use what is left, do you not?

A. The defendants use what is left? What do you mean by that? I claim that my invention is of hanging the treadle in the

211 lower end of the double vertical brace, and I claim the Singers are doing the same identical thing. I do not claim they are using blocks.

Q. Do you claim that when the block and cushion is taken out of your machine shown in figure 2, that the defendants use what is left of your machine?

A. I don't claim anything about that. I claim they hang the treadle in a vertical double brace, and that mine hangs in the vertical double brace when the blocks are out, and hangs in the vertical double brace when the blocks are in. It makes no change. It

always hangs in it. If I use knife-edged bearings on my machine, I do not use the blocks. It was optional with me to describe knife-edged bearings, if I wanted to. I had to describe some kind of a bearing. Knife-edged bearings are my preference today, and always have been.

Q. You have stated that a good many times over.

A. You will understand it after a while.

Q. Here is your machine. Do you claim that the defendants are using what is left of your machine after the cushion and the block shown in figure 2 are removed?

A. I do not see why you read that here.

Q. I am asking you whether you claim that the defendants are using what is left of your combination here, when the cushion and block are taken out of the openings as shown in figure 2?

A. Yes, sir.

Mr. WHEATON:

Q. Now, do you undertake to say that, with this large opening left vacant shown in figure 2, and the knife-edge bearing of your trunnion simply resting upon its lower edge, is a better way of keeping the bearings of the treadle in line, than would be
212 the ordinary point centers that were in use before you made your invention?

A. They are both alike as to the alignment.

Q. Are you sure of that?

A. As sure as mechanics or language can come near anything.

Q. That is what we claim. Now, I will ask you squarely, and drop the subject with that, whether in your machine, if you leave out the blocks and cushion shown in figure 2, the trunnions would bounce and thump endwise when the treadle was in use or not?

A. When I use the treadle, no.

Q. Changing the subject, was the Domestic machine which you have mentioned sold in the counties where you are selling your machines?

A. Very few.

Q. That Domestic machine is still on the market, is it not?

A. So far as I know, yes. In fact, they have an office on Market street.

Q. That Domestic machine never did, to your knowledge, have the treadle bar or treadle hung in the lower ends of the vertical cross-brace; or in the vertical cross-brace at all.

A. None to my knowledge; not on this coast that I know of.

Q. Is it not a fact that in that Domestic machine, the bearings of the treadle are in exact alignment with each other, and have they not always been put on the market in that shape, and are they not on the market in that shape now?

A. I don't know anything at all about their exact align-
213 ment. I can tell you I found canvassers finding fault with the treadle, and saying they wished they would adopt some other treadle.

Q. Do you believe now you could find in this city, or with any of

the agents, a single Domestic machine in which the bearings of the treadle were not in exact alignment with each other?

A. Yes, sir, I think I have got one. I had one—I don't know whether I have it at the office—that was out of line, where the rod was bent, of the Domestic.

Q. In case that the block and cushion was left out, as shown in figure 2, and the trunnions did bounce and thump endwise, would not the treadle bearings be out of alignment while they were so bouncing and thumping endwise?

A. They will not bounce endwise as you imagine at all. It is a doctrine of permission—if you permit them to do that—and that is by foul play. They don't do it unless they are made to do it.

Q. Suppose they did do it. Would they be out of alignment while they were bouncing, or while they were thumping endwise?

A. No, sir, they cannot get out of alignment; it is in perfect line.

Q. If it was to bounce endwise?

A. If it was to bounce endwise a half an inch or a quarter of an inch, it would still be within line. There is no such thing as getting it out of line.

Q. And if it should bounce, that is, raise upward, it would still be in alignment just the same?

214 A. What would raise it upward? You raise it with your hand upward.

Q. If I had not your sworn specifications here, I would not suggest such a thing.

A. Where do you read, where it says, "If the treadle is upward, it will bounce"? Where do you read that?

Q. I have read it several times. It is the beginning of the second column of your specifications. "Pieces of leather, F, or other soft material, cover the top and end of each trunnion, to serve as cushions to keep the same close in its bearing, to prevent the noise which would result were the trunnions permitted to bounce and thump endwise, when the treadle is in motion."

A. But you said just now "upward."

Q. Bouncing would carry it upward, would it not?

A. You said "upward." Where is the word "upward"? I asked you where you read "upward." You said you kept me right to that specification. Where do you read "upward"?

Q. If it bounces, it must lift up. It could not go down.

A. But you said "upward."

Q. Certainly, and I say it yet.

A. I do not read "upward" here.

Q. Neither did I.

A. But you said "upward."

Q. I only read what was there. I said if it bounces, it has got to bounce upward. The whole opening above that trunnion bar is above, is it not?

A. You mean the treadle. The treadle is above the tie-rod; is that what you mean?

215 Q. There is your knife-bearing on your trunnion in figure 2?

A. That is it.

Q. The opening is above that, is it not?

A. Above the treadle; that is correct, yes.

Q. If it bounced at all, if it moved at all, it would have to move up instead of moving down?

A. No, sir.

Q. It could not move down?

A. If it bounced endwise, that is not upward. You said upward. You held me right strict to the language. I ask you to find me "upward."

Q. I find in this space here, in figure 2, after the cushion is removed, that with reference to the bearing is upward.

A. You infer the word "upward."

Q. I did not tell you the word "upward" was in the specification, or anything of that kind. I ask you now if that does bounce upward, would it put it out of alignment?

A. Bounce upward? It does not bounce upward.

The COURT:

Q. Mr. Cramer, if it should bounce and thump endwise, would it get out of line?

A. No, sir.

Q. Then the cushion, the piece of leather, the soft material in the opening above the trunnion, is for the purpose of making it noiseless, is that it?

A. Yes, sir, that is for the purpose of making it noiseless. To prevent noise that could be made were they not there—that could be made—that might be permitted to be made.

Q. Is this noise made by the trunnions bouncing and thumping endwise?

216 A. No, sir; it is usually made purposely.

Q. I know. What happens if this trunnion should be permitted to bounce and thump endwise?

A. Nothing. If it is against a metal, it would make a little noise. You see, the law of gravitation would always fetch it. It would not throw any of the parts out of line.

Q. Was the bouncing and thumping endwise of the treadle bar a defect in any previous machine?

A. No, sir, there was no such thing; there is no such device of that kind in existence; no treadle hanging in the vertical double brace.

Q. What I want to know is, whether you are trying to cure some defect by providing that there would be no noise when these trunnions were in operation, if they were permitted to bounce and thump endwise?

A. No, sir; they are simply for the purpose of permission. If they were permitted—if a person wanted to—competitors—if you have space, they generally take hold of the treadle, and say to the party, "Just see how this rattles," and they shake it sideways.

Q. Then the purpose of this cushion and the soft material on the top is to prevent persons from meddling with the machine?

A. That is it. That is the principal object.

Q. Making it appear as though it was out of gear?

A. That is it. A noisy machine.

Mr. WHEATON:

Q. Then, the defect which your cushion and block was to cure was merely a defect that was created in your machine, and which did not exist in other machines?

217 A. I do not see any defect about it. It is an auxiliary adjunct to the treadle, to the peculiar shape of that machine; not a necessary element to the machine at all.

Q. You say there were no prior machines that would bounce or thump endwise, that is, from the motion of the treadle?

A. There are prior machines that you could do that with, yes. There are.

Q. Which were they?

A. The Wilcox & Gibbs, that you could do that with; that you could take the treadle and shake it like that (illustrating).

Q. I am speaking about the treadle bouncing, just by the motion of the treadle when the machine is in use.

A. They are not apt to do it. A good operator gives a motion to the treadle so as to produce that.

Redirect examination of HERMAN CRAMER.

Mr. MILLER:

Q. Mr. Cramer, you were asked upon cross-examination if you did not write to various other sewing-machine companies, calling their attention to your patent? And you were asked of any of them made an offer to buy the patent from you?

A. Yes, sir. They made me no offer. They thanked me very kindly for having called their attention to it, and just for the present they didn't wish to invest, or did not wish to buy, or did not wish to make a change, or something of that kind. One answered in one way, and then another in another way. Some of them went to work here three or four years afterwards, and used those. They never got any permission.

218 Q. Which were the companies that did that way?

A. Well, the American Company is one, and the Crown or George Bent was another, and the Standard is another. Those are the three. And there are others, but I cannot call to mind who they are now.

Q. Is there a company called the Diamond Company?

A. Yes, sir. They said they could not use it—I forget just what they said, but it was very good, and they thanked me for it, they said, and they then went to work and used it—that is, the Diamond used it.

The COURT:

Q. They used it?

A. Yes, sir. They used my patent pretty well. At least I saw it on a machine by that name, so I inferred from that that it is the Diamond Company.

Mr. MILLER:

Q. Are those companies you have just mentioned engaged in selling machines containing that invention?

A. To the best of my knowledge, they are all continuing to sell those machines. I have seen these machines containing the device. These companies are outside of the Singer. I am not referring to the Singer. We all understand what the Singer did.

Q. A machine was shown to you here called the "Crown" or the "New Crown," it is called, which shows a treadle mounted in a cross-bar in the lower part of the machine. When did that machine make its appearance on the market here?

A. Well, I think about in 1884—1883—1884, I think, or 1885; somewhere along there, subsequent to my invention.

219 Q. That is the "New Crown." What is the New Crown concern?

A. Mr. George Bent, of Chicago, was the getter-up of the stand; that is from information, and he would put Singer machines on the top, and also the Crown stand. That is taken from a circular. I have not seen a person do that, but from a circular I should judge that is so.

Q. You say he put this New Crown machine on the market along about 1884 or 1885. What other machines did he put on the market after that?

A. He put a machine, I noticed once, called the "New York Singer." The New York machine has point centers going through the legs and in the brace.

Q. The point centers do not go through the diagonal cross-brace in this New Crown machine here?

A. No, sir.

Q. Afterwards you say he put them through the lower ends of the cross-brace?

A. That is it as it came to my notice. I do not know which was first, but as it came to my notice, I noticed the other one afterwards in Bent's circulars.

Q. What machines did the Singer Manufacturing Company have on the market up in your territory there, just prior to the time when they put the Diehl machines on there?

A. They had the low-arm Singer, with the cones, and their screws in these cones on the rod, and also a pattern that is called the Miller and Diehl pattern, that was on point centers on the brace—

220 the point centers were forward and the brace backward. The point centers went through the legs of the machine. They do not go through the diagonal cross-brace. Those were the machines they had on the market prior to the time they put on the

Diehl machine. Then along about 1884 or 1885, along there, they put on this new-style machine, the Diehl machine. After I informed them of my invention, shortly after, in 1884, I saw an advertisement in the "Sewing-machine Advance," and then in about 1885 I saw the machines right there in Sonora.

Q. They have kept these Diehl machines, of that style, on the market ever since, have they?

A. Yes, sir, they have. That is their standard machine. On all machines, the tops are different. They have vibrating and oscillating machines. The stands are all alike.

Q. So that practically ever since they have put this Diehl machine on the market, they have retained that style of machine as their standard machine, without any material change in it?

A. Yes, sir.

Q. What was the first machine you knew of the Singer Company having on the market?

A. The treadle was on a rod held by cones and set-screws. In other words, collars with screws on the top.

Q. Was it similar to this Plaintiff's Exhibit "E"?

A. Yes, sir, that is it. Just like that.

Q. This is the rod and this is the treadle, and here are the collars or the cones, and the set-screws that hold it, and they had another one on this end?

A. Yes, sir.

221 Q. And that was mounted in the legs of the machine?

A. Yes, sir that was mounted in the legs of the machine.

Q. Had nothing to do with the vertical cross-braces?

A. Nothing whatever.

Q. That is the one which you specified had those defects, in the working of the cones and the treadle getting out of line, was it?

A. Yes, sir, that is correct.

Q. When was the Singer Company selling that style of machine?

A. I presume it was the first—somewhere about 1860 or 1861, somewhere along there.

Q. What was the next machine that you knew of their selling, different from that?

A. The next was a patent they called the Diehl and Miller patent.

Q. And that is the one in which you say they had point centers going through the legs?

A. Through the legs. The point center was forward. Then the brace sets backward here from the point centers. I don't think they run that many years.

Q. How long do you know of their keeping the machine in your territory?

A. Until they got the vertical brace machine, I think seven or eight years, somewhere alone there.

Q. Then this Miller and Diehl patent that you speak of was succeeded by the Diehl patent you have spoken of?

A. Yes, sir. First they had the Miller and Diehl machine,
222 and then the Diehl machine, and they have kept the Diehl construction ever since. In other words, they commenced to my knowledge using it in 1884; that is, I saw the advertisement first in 1884, and in 1885 they had them in Sonora. I infer that they used them from 1884, from the time the patent was granted, from the advertisement. I infer that from the fact that a person usually has his machine for sale when he advertises it, and I date it back to 1884 from the time when the advertising commenced, or when I first saw the advertisement in the Sewing Machine Advance.

Q. Referring again to this New Crown machine that you have here, you stated something about getting up that device yourself. What was that?

A. The treadle on the bar, with point centers to meet the treadle, so as to make as perfect alignment as could be on a bar; I got up that device.

Q. When did you get that up?

A. Well, it is some time before June, 1880, that I had it all complete. In fact, I had the iron in my workshop for quite a while experimenting on this machine, and that machine, seeing which I liked best, and I got that up and attached it to two legs. I found that would not do. I found I had to have a brace up and down with it, that it was not stiff enough. I found that was too expensive, that that would not do for a poor manufacturer at all, and I just set it to one side, and didn't know whether I should need it or not.

Q. And then you went on further with your experiments, and finally reached this patented device?

A. I experimented right straight along with the different
223 devices, and when I got the one down on the bearings of the treadle, got the treadle down on the brace, why, I says, "I have struck it now."

Q. Have you got one of those early devices in which you had the treadle hung on the bar?

A. I have got the brace on which I had it. It got broken. It is upstairs. The brace was broken off.

Q. Mr. Cramer, Mr. Wheaton seems to have an idea that you testified that this New Crown machine that is shown here in this model was in existence and on the market at the time you made your invention. Did you testify to that?

A. No, sir, it was not. There was a Crown machine, but it was not like that. It was an old-style Crown machine, with cones and set-screws or collars on the rod.

Q. The treadle was mounted on the rod in that Crown machine, was it?

A. Yes, sir.

A. Yes, sir.

Q. And then afterwards you say, along about 1884 or 1885, this New Crown appeared upon the market in which it was mounted in that way?

A. Yes, sir, that is it.

Q. And this mounting shown in the New Crown was the same identical mounting that you had devised and invented prior to 1880?

A. Yes, sir, that is it.

Q. Mr. Wheaton also called your attention to the fact that in the drawings of your patent it appeared that the band wheel was journaled on the legs of the machine, or on one of the legs of the machine, and not in the vertical cross-brace. I will ask you if it makes any difference whatever, so far as keeping the parts in alignment is concerned in your machine, whether the band
224 wheel is on the legs, or whether it is on the cross-brace.

A. I don't think it makes a bit of difference, so long as the treadle is in the double vertical brace.

Q. In the machines which you manufactured and sold, I understood you to say that on some of them you put the band wheel on the leg, and on some of them you put it on the brace?

A. Yes, sir.

Q. When you put them on the brace, how did you do that?

A. I had a stud that was right on the wheel. The wheel was a wheel that is used by the Davis Company, and I had a piece of casting cast right on there. Of course, I have a blank model at the foundry that I could fetch here, to show just exactly how that was constructed.

Q. When did you first put the wheel on the brace?

A. That is, a piece cast practically in the machine?

Q. Yes.

A. That was in 1893.

Q. How did you come to do that?

A. I made the experiment by taking the head of a machine in Sonora, and then put a large shaft in it, and then held it to the brace, and worked it that way. That would not be a merchantable machine. In 1883, when I had this lot of machines cast at the O. K. foundry here in San Francisco, Hart & Fisher told me that if I could fix the machine so it would not shake so much like a fanning mill, they told me they would give me $2,000. I said, "It is some work for me, but, however, I will get it up, and I will have a couple of them cast." So I had a couple of them cast, and then I took them up to Hart & Fisher, and they were having an establishment
225 on Ellis street, and they operated the machine and said, "Mr. Cramer, this operates excellently. It is nice. It is good." And that is all I got for it.

Q. Did you ever inform the Singer Manufacturing Company of that device?

A. I did. When I saw this advertisement and wanted them to embody this improvement in their machine, I informed them that I had also invented—I have forgotten whether it was at that time or the subsequent time, but I informed him that the wheel on the brace was also my invention.

Q. You notified them of that, did you?

A. I did, but I think they saw it when I was taking this machine

around here with the wheel on the brace. I think some one saw it. That is what I imagine; I don't know.

Q. The fact is, they put the band wheel on the brace in their machines afterwards, did they?

A. They did.

Q. You did not apply for any patent on that?

A. No, sir, I did not.

Q. So that is gone?

A. That is gone, yes, sir.

Recross-examination of HERMAN CRAMER.

Mr. WHEATON:

Q. Have there been any improvements made in the stands of sewing machines since 1880, that you do not claim to have invented yourself.

A. I do not know of any.

Mr. MILLER:

Q. Did you understand what he meant by the last question?

226 A. I don't know as I understood it, Mr. Wheaton, really.

The COURT: I do not think it is worth while to go into that.

Mr. MILLER: It was intended as a piece of sarcasm.

Mr. WHEATON:

Q. Did you not testify in your direct examination here that you made application for that band wheel journaled to the legs?

A. I did make an application for a patent—no, not for that band wheel.

Q. What was it you applied for a patent for and did not get it?

A. For journaling the brace, and, if I must tell it now, I will tell it, and putting a wheel on the outside of the leg, and on which the Singer Company are already infringing.

Q. That was where the band wheel was on the outside of the leg?

A. And at the same time on the vertical brace.

The COURT:

Q. On the outside of the leg and at the same time on the vertical brace?

A. Yes, sir.

Q. How did you get the vertical brace on the outside of the leg?

A. Here is the model that shows it, and here is where they saw it. The wheel is on the outside, and yet the bearings are on the vertical brace. That is the patent I applied for, and the attorney exploded it all up, and it is not worth five cents, the patent.

Mr. WHEATON:

Q. You say if the treadle in your machine, the way it is fixed, were to move half an inch endwise, the bearings would still be exactly in line?

227 A. Exactly; that is what I said.

Q. Would it not cramp the bearings of the pitman, both at the top and bottom, if the treadle bar were moved endwise?

A. But the law of gravitation won't allow it to do that.

Q. Answer the question.

A. It is the question of what it will do. If it will do that, and won't do it, it is two different things.

Q. When you were answering Mr. Miller's questions, you did not apply the law of gravitation. You said if it moved endwise, it would still leave it in perfect alignment?

A. Yes, sir, certainly.

Q. But would it not cramp the bearings of the pitman at both ends?

A. Most assuredly, if the pitman was to be crowded out of its center of gravitation, it would crowd it, if the pitman would crowd it out of its center of gravitation.

L. W. SEELY, called for the plaintiff, was sworn, and testified as follows:

Mr. MILLER:

Q. Mr. Seely, what is your occupation?

A. I am solicitor of patents. I am a member of the firm of Spear & Seely, having offices in this city and in Washington, D. C. I have charge of the offices at this end of the line.

Q. Mr. Seely, what experience have you had with regard to the study of patented mechanisms, and giving testimony in regard to the same?

A. As boy and man I have been engaged in learning and practicing that profession for nearly twenty-five years—since I
228 was sixteen years old. For the last ten years, during which time I had resided in San Francisco, I have been engaged in the same practice, and, in addition, it has been part of my occupation to testify in cases of this sort. My experience in that line has covered the whole range or field of inventions and patents relating to them. I have examined the Cramer patent which is in suit here. I testified at the former trial of the case. I have testified several times upon this subject-matter. I have made an examination of the state of the art, prior to the date of the Cramer invention. I have become familiar with the state of the art relating to sewing-machine patents, so far as relates to the frame and treadle. I have made a study of that.

Q. Will you please take the Cramer patent and explain briefly, in your own language, to the jury, the nature of the mechanism and its mode of operation that you therein find described. You may illustrate it by any models that are here present in the court, if you desire to.

A. The invention is stated to be a treadle for sewing machines, and its object is stated to be to provide means to keep the treadle bearings rigidly in line and at a fixed distance apart, and also to make the movement in use noiseless. The frame of a sewing

machine consists of two legs which support the table on which is the operating mechanism, with which we have nothing to do. In order to stiffen this frame or these legs and keep them rigid they are universally connected by what is called the vertical double brace. It is called the double brace because it is con-
229 nected to both sides or legs and at top and bottom, and extends across the machine between them. At the bottom of this frame is mounted the treadle which operates the band wheel by means of a pitman connection, and this band wheel, of course, operates the sewing-machine shaft. Before the time of Mr. Cramer's invention, it was usual to mount these treadles upon a tie-rod which extended across between the legs at the bottom, and in order to provide a bearing for the treadle, collars of cone shape were mounted on this rod which engaged with sockets in the end of the treadle, and these collars were held in place by set-screws, which are simply screws passing through the collar and bearing upon the rod. The treadle did not oscillate upon the rod directly, but upon these collars. What I have just described is illustrated in this device which I hold in my hand, marked Plaintiff's Exhibit "E." The treadle bears upon the collars which you see here, secured to the rod by these set-screws, one in each, which collars are of conical shape. The end of the treadle has a socket which is also of cone shape, so that they engage. The bearing is not upon the rod, but upon the cones, and the construction is the same at both ends of the treadle. If these cones are properly placed and are held tightly in position, the treadle will rock upon them and operate correctly. But any collar held by a set-screw on the shaft is liable to work loose when the part which moves upon it is subjected to long-continued use or oscillation. And as soon as these collars work loose, the treadle becomes loose, rattles, shakes endwise, and the bearings are no longer at a fixed distance apart. That was the common style of treadle
230 bearing previous to Mr. Cramer's invention. Treadles were also mounted in the legs of the sewing machine, by any suitable kind of bearings, such as point-center bearings; mounted directly in the legs. In that case the operation of the treadle had a tendency to spread the legs, in which case the fit of the bearings would no longer be accurate. In other words, they would be out of alignment, and the treadle would run hard and wear the bearings unequally. This vertical double brace, which connects the legs of the sewing machine, is one solid casting, perfectly rigid. Mr. Cramer conceived the idea that if he hung his treadle in this brace, it would be totally disconnected, both from the legs of the machine and from the tie-rod, and all the objections, which had been insuperable, from both of these forms of treadle support, would be done away with. That is the construction which he describes in this patent, the hanging of the treadle on bearings which are in holes at the lower ends of the vertical double brace. And, as that brace is a solid, rigid piece, the bearings always remain where they are first put, that is, in line. If the legs should spread, no effect is produced upon the bearings of the treadle, since it is impossible for

the fork of a double brace to move or to spread, and the bearings remain in line and at a fixed distance apart.

Mr. MILLER:

Q. Did you discover, in your study of the state of the art prior to the Cramer invention, that sometimes the treadle had been mounted upon knife-edge bearings upon the tie-rod?

A. Yes, sir. Previous to Mr. Cramer's invention, there were many different styles of bearings in use in sewing machines,
231 all of which permitted the treadle to operate, and among them was the knife-edge bearing.

Q. Does this represent in any way one of those bearings with the knife-edges or the bearings for the knife-edges, rather, mounted on the rod?

A. This represents a rod having collars, and these collars contain seats or bearings or grooves which are evidently intended to receive knife-edges on the treadle. That is the construction you refer to.

Q. What would be the method of operation with that kind of device? That is, what would be the mechanical operation of it?

A. When the treadle is set in these bearings, it oscillates upon that center just like any other bearing. Mr. Cramer describes and shows in his patent a knife-edge bearing, mounted in the lower ends of the vertical double brace. That appears to be the construction that he preferred to use.

Q. Right there, what is the usual custom in writing specifications of patents, with regard to describing the forms of the mechanism? Do you attempt to describe all forms, or how is that?

A. Where there are a number of forms which we consider to be equivalents of each other and to operate in the same way, and where the inventor has a choice or right to select from among them, we describe the one which he prefers to use, for the reason that the Patent Office requires but one operative form to be shown. Of course, we do not limit him to that form, but use it as illustrating a number of different forms which he might use if he so desired.

232 Q. At the time that this patent was applied for, what different forms of bearings for treadles of sewing machines were old?

A. I know of the point-center bearing and the knife-edge bearing, to which we have referred, and the cone bearing on the rod. There have been ball bearings since, but I do not think they were used at that time.

Q. The three that you first specified were all old at the time of that first application?

A. All well known and old; anybody had a right to use them.

Q. In fact, those bearings were very old in mechanics, were they not?

A. I believe so. Many years before Mr. Cramer's time, they were well-known mechanical equivalents of each other for all purposes.

One of them might, perhaps, be better for a given purpose than the others, but it is a matter of choice entirely.

Q. How long have you known knife-edge bearings in mechanics?

A. As long as I have known anything in mechanics. Perhaps the most common use for the knife-edge bearing is in the scales, where they require a very delicate adjustment, which the knife-edge bearing gives. I have known point-center bearings a very long time, too.

Q. And you say it was recognized in the mechanical arts that——

Mr. WHEATON (interrupting): If your honor please, I object now to testimony tending to show what may be equivalents of
233 the knife-edge bearings described in the patent, upon the ground that the patent particularly specifies elements that cannot be taken out of it by construction and substituting others for them. Mr. Cramer calls them trunnions with knife-edge bearings; trunnions cast solid with the treadle and hung in the openings through the lower extremities of the cross-brace. The proposition is, to undertake to prove that other devices, which could not be used in place of them in that construction, may be shown to be equivalents under another form of construction, and so work out an infringement in that way.

The COURT: The application of that, Mr. Wheaton, eliminates what from this examination—conceding that what you say is true?

Mr. WHEATON: I eliminate from it just what Mr. Seely is going on to describe as a mechanical equivalent.

The COURT: I think not. The claim sued upon in this case is the first claim of the patent, and that is "the vertical double brace joining the legs of the two ends of a sewing machine, provided with holes through its *its* lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings, substantially as specified." If I understand that claim, as the matter is now before the court, no testimony and no law has been presented that would indicate that by the use of the term "trunnions" he limits himself in the bearings. That is to say, by using the word "trunnions" there as the end of his side of the treadle, nothing has been presented to indicate that that limits him in his bearings. What the court may conclude hereafter upon that
234 subject, or what the testimony may reveal as the trial progresses, I do not undertake to say. But, as the evidence is now before the court, it appears to me that in using the word "trunnions," he has not limited himself at all in the matter of the word "bearings." And, as I understand the witness, he is being asked particularly with respect to those devices that had relation to the bearings. Is not that so, Mr. Miller?

Mr. MILLER: That is it exactly, your honor.

The COURT: As we have the case now, there is no limitation. I do not propose to rule now so as to foreclose any further information that the court may have, either as to the law or the facts. But, as the case now stands, I do not understand that by using the word "trunnions," he has in any way limited himself as to the particular

bearings that may be used in his machine. Of course, you say that a trunnion is the same as the ear or the support on the side of a cannon. As it is there, it is circular, and if a trunnion must be circular and its bearings must be in a circular orifice, that would make a very different matter with respect to this case. But I do not understand that a trunnion is necessarily circular. A trunnion may have a knife-edge, if I understand it correctly, and it may oscillate as the cannon will oscillate in its bearings. But it may be a knife-edge put to the end of the trunnion. That being so, Mr. Wheaton, without committing the court as to what instruction it will give the jury upon that subject, I think the testimony is relevant and material.

Mr. WHEATON: Will your honor allow me a further remark, growing out of the remarks of your honor?

235 The COURT: You referred to a well-known principle of law, and I answer you that the witness is going to furnish testimony upon that very subject as to what equivalents there are that would correspond to this particular bearing he had here—that is, equivalents under the law. Is that correct, Mr. Miller?

Mr. MILLER: That is correct, your honor.

The COURT: That you are going to produce testimony as to what would be the equivalent of this bearing under the law?

Mr. MILLER: Yes, your honor, that is my idea exactly.

The COURT: Equivalents that were in existence at that time?

Mr. MILLER: Yes. In other words, my whole contention was this, that no part of the Cramer invention inhered in the form of its bearing, but that his invention was something that was beyond or beside that, which required, however, for its operation, some kind of a bearing. We say the same thing about trunnions and knife-edge bearings in the claim. For the purpose of showing that he did not intend to limit himself to that form of bearing, I was proposing to show, first, that his invention, the essence of it, inhered in something else, but that it was necessary to use some kind of a bearing in connection with it, and then I propose to show that all of these forms of bearings were mechanical bearings old at the time, and that he selected the knife-edge bearing as being the best.

The COURT: Mr. Wheaton's objection went to a rather more
236 technical point than that, and I desire to reserve that as far as I can and dispose of it with proper instructions in the end. I shall therefore, Mr. Wheaton, overrule your objection, with this explanation that I have just made.

Mr. WHEATON: I would like to make a remark right here, your honor. What I want to have kept in this claim is the trunnion.

The COURT: I observe that.

Mr. WHEATON: The trunnions are an element.

The COURT: You do not want to loose the trunnions in this controversy, and you want a mechanical trunnion, as you say, as described.

Mr. WHEATON: I do not make a particular point whether that trunnion oscillates on a knife-edge or on a cylindrical point, but it must be a trunnion, and it must be a trunnion that is fitted to slide

in those openings through the lower end of the brace-bar. If they will confine themselves to that, why, then, we will all agree.

The COURT: I think we will probably have to do that.

Mr. WHEATON: What they propose to do is to introduce something that is not a trunnion at all.

The COURT: I will overrule the objection, with the explanation already given.

Exception Four.

To which ruling of the court, the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Mr. MILLER:

237 Q. Mr. Seely, a good deal has been said here by the counsel regarding trunnions and trunnion bearings, and the word trunnion as mentioned in the Cramer patent. What is the primary meaning or acceptation of the word "trunnion," and in what connection is it primarily applied?

A. Do you ask me for a definition of it?

Q. No, I do not ask you for a definition of it, because perhaps it is hard to define; but what is the connection in which it is ordinarily applied?

A. It is usually applied in connection with cannon mountings and oscillating steam-engine cylinders. I have, however, seen a more general definition than that myself. In Knight's Mechanical Dictionary, for instance, he defines a trunnion in three ways: First, by referring to the cannon mounting; secondly, by referring to the oscillating cylinder; and, thirdly, by stating that a trunnion is (I am not sure that I repeat the words exactly, but this is the substance of it) any axis of substantially the same character. So that its meaning is not necessarily limited to its use in connection with those two mechanical devices.

The COURT:

Q. "Any axis," you say?

A. Any axis of substantially the same general character.

Q. Would the axle of a wagon be a trunnion?

A. I do not think it would. I should only use the term "trunnion" to refer to the cannon or the oscillating engine, or the support for a Bessemer converter, or something of that sort hung in that way. I do not regard the use of the term "trunnion"
238 as particularly correct or accurate in this patent. But I am referring to the thing and not the name.

Mr. MILLER:

Q. How is it ordinarily applied in the cannon?

A. In the cannon the trunnions are cast or formed with the metal body of the cannon, and they rest in what are called checks, which are half bearings in the gun carriage, so that in that way the cannon oscillates up and down in the gun carriage, and the

knobs, pins, or projections which are called technically the trunnions, are cast onto the cannon as a part of it.

Q. Suppose you were to cut off those trunnions from the cannon and fix them solidly in position in the gun carriage, so that they would extend from the gun carriage instead of from the cannon, and then should make a hole of the same diameter in the side of the cannon, and insert them into such holes. Would the cannon oscillate backwards and forwards just the same as it did before?

A. Exactly the same. You would simply have reversed the construction by making the trunnion stationary where before it was movable.

Q. In one case the trunnion would be stationary on the gun, and in the other case it would be reversed and made stationary with the gun carriage?

A. No, sir. In the one case it is moveable with the gun, and in the other case it is stationary upon the gun carriage and the gun moves upon it.

Q. In the two cases, then, there would be a reversal of parts?

A. Exactly.

239 Q. Would there be any change in the mode of operation?

A. The oscillation and the operation are precisely the same in both cases.

Q. Would there be any change in the result?

A. Not at all.

Q. If you were to have knife-edge bearings on the end of a trunnion, would there be any difference if you were to have the solid projections on the piece itself, and let them oscillate in bearings on the carriage, or if you were to transpose them, just as you have done in the other case, and put the solid piece on the carriage and make holes in the gun for them to oscillate in, the only difference between the two cases being that they are now provided with knife-edges, instead of round, smooth bearings?

A. There would be no difference at all, provided there is the knife-edge connection between the moving part and the stationary part, and it makes no difference on which the knife-edge is placed, or the trunnion, if you choose to call it so.

Q. How would it be with regard to point-center bearings as to the interchangeability of position?

A. I can remember one instance of an exact reversal or interchange of positions in point-center bearings. That was in the case of the old-style bicycle with the large wheel. The steering head of the bicycle was a socket, and at the end of what was called the backbone were two trunnions with cone-shaped ends, and they fitted

240 above and below in these sockets in the steering head and were adjusted there. An exactly opposite construction was used at that time, in which the sockets were on the neck or end of the backbone, and the cone-pointed centers were screwed down through the steering head and engaged with it. It was not as good a construction, of course, in a bearing of that kind; the longer the distance between the centers, the steadier and the better the bearing is. So that the second device I have mentioned did not

go into general use. The bearings were too short. But its operation as an oscillating steering device was precisely the same as the other, which was a direct reversal of it.

Q. The only difference was that there had been a reversal of parts, or rather a reversal in position of the respective parts.

A. Yes, sir.

TUESDAY, *April* 3, 1900.

Direct examination of L. W. SEELY resumed.

Mr. MILLER:

Q. Mr. Seely, at the hour of adjournment last Friday, you were explaining the matter of trunnions and bearings. I will ask you to produce, if you have it, the exact definition of "trunnion" as given by Knight's Mechanical Dictionary.

A. This is from Knight's Mechanical Dictionary: "Trunnion: 1. (Steam-engine.) One of the hollow axes on which the cylinder of an oscillating steam-engine reciprocates, and through which steam is received and exhausted. 2. (Ordnance.) One of the cylindrical projections from the side of a cannon or mortar which rests in the cheeks of the carriage, forming supports for the piece and an axis on which it turns during elevation or depression. 3. A general term for an axis of similar character to the above."

241 Q. Which one of those definitions is the broadest?

A. The third. The others seem to be applied to particular purposes.

Q. I now hand you a rough wooden model, Mr. Seely, and ask you if you can illustrate to the jury by means thereof the operation of a trunnion, supposing, for the purposes of illustration, that this center piece represents a gun and the two side pieces represent the carriage of a gun.

A. In this model, this block, which may be supposed to be the gun, has a trunnion in the side which I assume to be a fixed or solid part of it. That is to say, the model is made so that this piece of it is tightly in the hole in the side and has no motion. This piece will represent the gun carriage, and, by fitting the two together, it will be seen that the carriage will oscillate upon that trunnion in its bearing after the usual style of a gun mounted in a carriage.

Q. That is really a technical trunnion, is it?

A. That answers the definition of a technical trunnion.

Q. And in that case, this projection or trunnion is cast onto the gun itself as a part thereof, is it?

A. Yes, sir.

Q. Suppose it were arranged so that you could take that trunnion away from the gun, cut it off; and in place thereof make a hole in the side of the gun carriage, and then put the trunnion in the hole on the carriage, and then put it together again. Would it operate just the same as before, the same so far as oscillation is concerned?

A. Exactly the same.

242 Q. What is the only thing you have done, then, in that case?

A. I have taken the fixed trunnion from the cannon, leaving the hole which it fitted, and I have reversed it so as to put the fixed piece in the gun carriage, and mounted the cannon on it in the same way. It is a simple reversal of the parts, but both remained an oscillating bearing between the fixed part and the movable part, operating in precisely the same way in both cases.

Mr. MILLER: We will offer in evidence this first model, the one as to which the witness has testified, if your honor please, and ask that it be marked with the next letter in order.

(The model referred to was here introduced in evidence and marked Plaintiff's Exhibit "R.")

Q. Mr. Seely, I now hand you another model, with a projection on the end of a little different construction from the former, and ask you what that represents.

A. This represents a trunnion or pivot or journal, or whatever you may choose to call it, mounted in the side of the block or cannon, and having a knife-edge formed on it.

Q. What is the only difference in the form of the bearing of the first model and the form of the bearing in this one?

A. In this model, the model Exhibit "R," the bearing is what is known as a plain parallel bearing, two cylindrical surfaces.

Q. The only difference between the two models, then, is that the first model has a round or pin bearing, and the other has a knife-edge bearing?

243 A. Yes, sir. The knife-edge bearing is a part of the complete circle which was formed by that bearing.

Mr. MILLER: I will pass this model up to the jurors so they can see it. We offer it in evidence, and ask that it be marked Plaintiff's Exhibit "S."

(The model referred to was here introduced in evidence and marked Plaintiff's Exhibit "S.")

The COURT: I understand, then, that the round or pin bearing, as you call it, is Plaintiff's Exhibit "R," and the one with the knife-edge bearing is Plaintiff's Exhibit "S"?

Mr. MILLER: That is correct, your honor.

Q. What does this part of this last model represent?

A. This part of Exhibit "S" represents the gun carriage or the stationary part of the gun structure, with the other portion with the knife-edge bearing in place.

Q. You can remove that knife-edge bearing, can you?

A. The model is so built that you can remove it.

Mr. MILLER: I will pass this model Exhibit "S" up to the jurors also.

Q. How is that depression or socket there formed? What is its shape?

A. In Plaintiff's Exhibit "S" it is round, there is a V-shaped

groove there, made at a different angle, shallower than the knife-edge, so that the knife-edge can oscillate in it.

Q. Is it intended that the knife-edge should oscillate in the bearing that way?

A. Yes, sir.

Q. Would that form a knife-edge bearing, then?

A. Yes, sir.

244 Q. So that would be really a trunnion provided with knife-edges, would it?

A. I so consider it.

Q. If we put this V-shaped groove or bearing into the side and then put the knife-edge trunnion in there (showing), what construction would that represent?

A. That represents a simple knife-edge oscillating bearing.

Q. As in the case of the other cannon, remove the trunnion from the gun and put it into the carriage, and remove the socket from the carriage and put it into the gun, and provide a bearing that way—as was done in the first case?

A. Yes, sir. That is done in the same way, by making a simple reversal of the parts.

Q. In the model as you have it now, what have you done?

A. I have taken the knife-edge trunnion from the gun here and placed it in the carriage, and I have taken the V-shaped groove from the carriage and placed it in the gun. But the two together operate in just the same way.

Q. What does that simple illustration show, then?

A. It shows, to my mind, that the trunnion bearing is interchangeable; that is to say, it makes no difference whether it is on the stationary part or on the movable part, the result being the same.

Q. So that, in the case of the knife-edge trunnion, you can do the same thing with it that you could do with the plain round trunnion?

A. Yes, sir.

245 Q. Look at the other end of this V-shaped bearing of the model. I will ask you what that represents and what that is.

A. That is what is known as a point-center bearing.

Q. Is that the same as Plaintiff's Exhibit "Q," the conical screw-bolt that was offered in evidence here?

A. Yes, sir, simply an axis screw.

Q. I will ask you what is the construction of the opposite end of the knife-edge trunnion of this model?

A. The opposite end of the knife-edge trunnion has a socket shape to engage with the point center of the other part and fit it (illustrating).

Q. Will you put that point-center bearing into this block of wood, as you did in regard to the others, and see if it will operate?

A. Yes, sir. Now, I have placed the point-center bearing in the gun as a technical trunnion, and the socket in the carriage.

Q. The point-center bearing operates, then, in that depression in the gun carriage, does it?

A. It does.

Q. Would that form a trunnion bearing?

A. That is undoubtedly a trunnion bearing.

Q. Can you reverse those parts just as you did in regard to the others?

A. Yes, sir. I now take the point-center bearing and place it in the carriage, and I take the socket or depression for the point center and place it in the gun, and when they are put into engagement and the gun is properly supported, they operate as before, oscillating on the point center.

246 Q. What do these illustrations show with regard to these three different styles of trunnion bearing, to wit, the plain round bearing, the knife-edge bearing, and the point-center bearing?

A. They show to me the absolute interchangeability of the different bearings for the same purpose in the same construction.

Q. Do you know whether it is important whether the moving part is put on the gun or on the carriage?

A. It is quite evident that it makes no difference, the result being the same.

Q. Do you find the result to be the same whether the bearing used is the common or round bearing, the knife-edge bearing, or the point-center bearing?

A. The result is the same in all cases. There is an oscillating bearing formed between the two parts.

Q. Will you please look at the device which has been offered in evidence here as representing the machine made and sold by the defendant in this case, and sometimes referred to as the Diehl machine, and just explain the construction thereof, and compare it with the construction shown in the Cramer device?

A. Exhibit "P" shows the vertical double brace, treadle, band wheel, and connection, of a sewing machine. The treadle is mounted at the lower end of the vertical double brace, and the means by which it is mounted are, two point-center screws which pass through holes in the lower ends of the vertical double brace and enter depressions formed in the sides of the treadle, and these form an oscillating bearing on which the treadle works. In the Cramer
247 construction, the trunnions or journals are formed on the treadle and enter the holes in the vertical double brace. The relations between the parts are the same, and the oscillations of the treadle are the same. In fact, the bearings operate in precisely the same way.

Q. Do you find in this Diehl device that the treadle is mounted in the diagonal brace?

A. It is. This structure in Exhibit "P" is the diagonal brace in which the treadle is mounted.

Q. What is the object of this bar or rod across the bottom and underneath the treadle?

A. It has no object, whatever.

Q. Could you cut that bar off at the point where it joins with the double brace, and have the machine operate the same as before?

A. Evidently, for the reason that the vertical double brace is a

solid casting, and this particular bar performs no function in connection with the treadle. They prefer to make it that way, but it is doing nothing there, because it is evident that the treadle is mounted at least three-quarters of an inch above that bar and in the sides of the brace.

The COURT:

Q. Does it not hold the lower end of the brace compact, and make it a compact, uniform brace?

A. No, sir, because it is cast metal, and the whole thing is absolutely rigid.

Q. Then there is no spreading of that brace?

A. There is no spreading of that brace whatever. You can see that it is built for strength. The model here is cast with ribs, as you will observe. A short arm like that could never give.

248 Mr. MILLER:

Q. In this construction, I understand that they have used the point-center bearing or conical bolts similar to Plaintiff's Exhibit "Q." That is correct, is it?

A. Yes, sir.

Q. And these conical bolts, as I understand, are inserted from the outside through the ends of the brace, so as to extend inward and fit into the depressions in the treadle?

A. That is correct.

Q. Now, suppose, instead of that construction, you were to take out this point-center bolt from the machine, and insert it from the other side through the web of the treadle, and were to put the hole or socket in the diagonal cross-brace. Would the machine operate in exactly the same way as before?

A. Yes, sir. You would have the effect which was illustrated in the model, Exhibit "S." It would be a simple reversal of the parts, the bearings remaining the same.

Q. And the same result would be accomplished that was accomplished before, would it?

A. Exactly the same.

Q. In substantially the same way?

A. In substantially the same way.

Q. Looking now at the Cramer device, will you please state from your knowledge of the art what new features was introduced by him, if any, into the art, that was not in it before, in the operation of a sewing machine, as connected with the treadle?

A. With a certain end in view, he changed the location of
249 his treadle from the legs of the machine or from the tie-rod at the bottom, to the vertical double brace, and hung it there.

Q. Do you find in the patent, Mr. Seely, anything to show that Mr. Cramer did not intend to have it understood that his invention did not inhere in any particular kind of bearing? If there is any such thing in the patent, will you please point it out?

A. Yes, sir. I find that whereas he showed and described in the patent a knife-edge form of bearing, yet that he specifically disclaimed

that as forming any part of his invention, and expressly stated that it did not form any part of his invention. That is on the face of the patent.

Q. Knife-edge bearings were old at that time in the art, were they?

A. Very old, and so were point-center bearings.

Cross-examination of L. W. SEELY.

Mr. WHEATON:

Q. If I understand you rightly, Mr. Seely, you do not undertake to say that the conical-pointed screws used by the defendant constitute a trunnion?

A. I think I made it quite clear what my position on that was, and that is that the conical-pointed screws come under the general definition given by Knight as to what a trunnion is; that is to say, an axis of similar character to the technical trunnion.

Q. An axis suggests a revolving device, does it not, having a central axis, about which it revolves?

A. Not necessarily. Of course, an axis is, in theory, a line.

250 But it is used in the art very frequently to express the points which are the bearing points, just as a bearing, for instance, is ordinarily understood to be the stationary box in which the shaft turns, but it is also the movable part.

Q. In the definition given by Knight, he first refers to the trunnions of a cannon. In that case the trunnions oscillate as a solid part of the cannon. Suppose you were to reverse the operation, cut the trunnions off from the cannon, bore holes in the cannon for the round part to enter, and fix the other part stationary in the gun carriage, and do that upon both sides of the cannon. Would it not pretty much destroy the safety of the cannon by cutting it away?

A. If I were going to construct my cannon in that way, I should cast it with a good deal of solid metal at the sides to form a place for my socket. There would be no difficulty about that. I do not think it would be a good construction for a cannon, but it would be a practical construction.

Q. Then you think the cannon, in order to insure its safety, would require changing if you changed its trunnions into journals?

A. In fact, as cannon are made now, I think there is plenty of material there to make a shallow socket to hold a trunnion. But for a cannon, the construction now used is undoubtedly the best—easier to handle.

Q. Then the result is not precisely the same in both cases?

A. Yes, sir, the result in the operation of raising and lowering or depressing the cannon is precisely the same.

251 Q. I understood you to testify on your direct examination that the further apart the bearings were, the steadier they would operate, the steadier they would hold the cannon, etc. Is that correct?

A. That is generally correct, and in some instances it is desirable to get them as far apart as possible. Take, for instance, the balance

of a watch. Those projections or pivots, as the watch-maker would call them, on the balance, might be called trunnions. The watch-maker would not call them trunnions, but I dare say he would know what you meant if you called them by that name. Those trunnions fit in the jewels, and in order to give steadiness of motion to the balance, it is desirable to put them as far apart as possible. That is one instance. But, in the case of a cannon, where the axis is very short, and the distance is considerable between the centers in any event, that would not be a point of very much importance.

Q. Take such cannon as were in use when Knight's Mechanical Dictionary was first printed. About what would be the diameter of the cannon where the trunnions were cast on it?

A. I don't know. There were larger cannon in use then, as to mere size, than there are used now. Take the 20-inch guns that were used during the war; they were larger cannon than they are today. I can hardly answer that question unless you tell me what kind of cannon you mean.

Q. Take a full-sized cannon of today, if you please. About what is its diameter where the trunnions are placed?

252 A. Oh, probably a foot or fourteen inches; that is, the centers would be that distance apart.

Q. About how wide is the bearing of the trunnion in its bearing? That is, about what is the length of the trunnion where it bears in its bearing?

A. About three inches, perhaps.

Q. And about what is the distance between the side of tha cannon and that bearing?

A. That distance is very slight. It fits pretty close there. That is to say, these trunnions, if they are three or four inches long, and I am not perfectly certain of that—the cannon is dropped down into the cheeks and rests there, and they come pretty close up to the side of the cannon. The bearing, I suppose, to be about four inches.

Q. The two bearings on the two sides will amount to about six inches, would they not, adding them together?

A. I think likely.

Q. The diameter of the gun would be fourteen inches, you say. Is it not necessary that a cannon should be just as steady and solidly fixed in its bearings as possible?

A. It is highly desirable.

Q. If you take off six inches, the length of the bearings, and drill that into the side of the cannon, three inches on each side, that would leave how much between the two bearings? Eight inches, would it not?

A. That would leave eight inches.

Q. The points of the bearings, as placed in that sized cannon, would be twenty inches apart, would they not, and something over?

A. Yes, sir, as we are estimating the dimensions.

253 Q. And something over that, because there is some space between the cannon and the bearing?

A. Very likely.

Q. Do you think a cannon would rest just as steadily with those points only eight inches apart, as it would if those bearing points were twenty inches apart?

A. I think probably it would not. I should not advise the construction you are suggesting now for cannon. But if I were going to make a cannon in that way, I should enlarge the diameter of my cannon considerably at that point, and have more material there, so as not to weaken the gun.

Q. And, in order to not weaken the cannon, it would be necessary to put more material there, so as to still get the bearings further apart, and to leave the sides of the cannon its full thickness?

A. I think so, in the case of a cannon.

Q. Certain it is that all cannon trunnions are cast solid with the cannon and oscillate as the cannon oscillates?

A. So far as I know, they are.

Q. Is not the same that you have said with regard to the cannon true with regard to the oscillating cylinders of steam-engines?

A. I think so.

Q. That is, it is necessary to have a great deal of strength to those cylinders, on account of the power of the steam?

A. Yes, sir.

Q. And in the case of those engines, the trunnion is also cast solid with the cylinder?

A. Yes, sir.

Q. And if you were to reverse it and cut the trunnions off
254 and fix them solid in the cheeks of the seat, and then cut into the side of the cylinder to get a bearing for them, it would very much weaken them?

A. You would not cut into the side of the cylinder to get a bearing. Instead, you would put a boss or projection to hold the socket. There would be no difficulty in the world in doing that.

Q. In these illustrations which you have used with these models, Plaintiff's Exhibit "R," and Plaintiff's Exhibit "S," you have not put any extra material on the oscillating part?

A. Not at all, because I had those models made to represent treadles.

Q. Then, so far as changing the trunnions of a steam-engine or a cannon and cutting into the sides of the engine and the cannon, these models would not correctly represent what would be necessary to be done, would they? That is, they do not show any increased amount of material put onto the sides where the bearings come?

A. Oh, no. These models do not. They are intended to represent treadles, and, of course, in that case it would not be necessary to increase the amount of material.

Q. It always is the case, and always has been, has it not, that the trunnions in the oscillating steam-engines were cast solid with the cylinder?

A. I believe so.

Q. If you have examined the state of the art, you know it, do you not?

A. I believe so, but I should not like to say further than that is

my information on the subject, that they are and have been cast solid with the cylinder, as a preferred construction.

255 Q. If you were to cast more material on the sides of this steam-engine cylinder, or on the sides of the cannon, that would practically amount to a trunnion itself, would it not, by extending the sides of the cannon further out, and that extension oscillating with the cannon? Your idea is that an extension with the socket in it is the same as an extension without a socket, and both form a trunnion?

A. Yes, I think that is correct.

Q. In the defendant's machine, as shown in Plaintiff's Exhibit "P," there are no trunnions that oscillate with the treadle, are there?

A. I find a projection of metal here with the socket in it, which is a trunnion, according to the idea suggested by you.

Q. Is that any projection?

A. Yes, sir. There is not a doubt of it. It is a new idea to me, but since the question has just come up, I certainly find it here. The thickness is increased there, and there is a socket in it; there is extra metal there.

Q. Is there any extra metal in that, over and above the metal cast in ordinary treadles. Do they not always come to something of a projection there?

A. That I have not inquired about. My attention was attracted at that moment by that particular point.

Q. Is it not so in this treadle in Plaintiff's Exhibit "G," of Mr. Cramer's machine, before he comes to the trunnion itself? Do you not see on that a similar projecting extension of the treadle?

A. (After examining the model.) Yes, it may project slightly. But it certainly does here in Exhibit "P."

256 Q. Do the point centers in Exhibit "P," on which the treadle is hung, have an axis similar to the axis in the trunnions of the cannon and of the steam-engine?

A. Yes, sir, I consider them as similar. I certainly consider them as similar and the same. Not exactly the same in construction, but the same in operation, and the same in result.

Q. What is the axis of a revolving or oscillating shaft?

A. The axis is an imaginary line running through the center of the shaft. It is the center of the shaft, just as the axis of the earth is a line drawn through the center of the earth, about which it rotates. I think we mean the same thing, Mr. Wheaton.

Q. Is there any such thing as an axis of motion in mechanics?

A. There is. It is the center of motion, that is, the center or line about which the motion takes place.

Q. The trunnions of the cannon and of the steam-engine have that kind of a center, have they not, that is, a center of motion about which the trunnion oscillates?

A. Yes, sir, and that center of motion is in that case the center of the trunnion. There is oscillation from the bearing surface right into the center of the trunnion, where it theoretically stops, but every part is oscillating or moving in toward and to that center.

Q. But those trunnions do have an axis of motion about which they revolve, do they not?

A. Yes, sir, and that is their center.

Q. Do these point centers in Exhibit "P" have an axis of motion about which they oscillate?

257 A. You mean about which they themselves oscillate?

Q. Yes.

A. No, sir, they have not. They have an axis of motion about which the treadle oscillates.

Q. Do those point centers in Exhibit "P" have any axis of motion at all?

A. They have no motion. They have an axis of motion, which is the axis of motion of the treadle.

Q. How can a shaft have an axis of motion if it is stationary and does not move at all?

A. We have just been arguing that point, and decided that the actual axis of motion is stationary, that it is a line about which motion takes place. In this place we have an oscillating treadle, and it is hung on stationary point centers. There is an axis of motion, and that is the central line of the point centers, continued through the treadle and through the other point centers, and it passes through both the point centers, as well as through the treadle.

Q. You have distinctly stated that the trunnions of a cannon and steam-engine have an axis of motion about which those trunnions themselves oscillate. This is correct, is it not?

A. Yes, sir, that is correct.

Q. Do those point centers in Exhibit "P" have any axis of motion about which those point centers themselves oscillate?

A. No, sir, they have not, and I said so. I said they had an axis of motion about which the treadle operates.

Q. Then there is an axis of motion in the trunnions of the cannon and of the steam-engine which is not in the point centers of Exhibit "P."

258 A. In other words, the point centers of Exhibit "P" are stationary, and the trunnions of the cannon are oscillating.

Q. I simply cannot understand the point centers as having an axis of motion, being stationary; that is, that there can be any axis of motion in any stationary point center.

A. I know it is an exceedingly theoretical point.

Q. What I am getting at is the part of the definition in Knight's Mechanical Dictionary where, after describing the trunnions of the cannon and of the steam-engine, he states in general terms, "Any axis similar to the above." I believe that is about his language. If in that case he refers to the axis about which the trunnions themselves operate, there can be no such axis in another shaft or journal, or device which does not oscillate, can there?

A. I cannot answer you Mr. Wheaton, further than as I have before done, that the axis of motion in a treadle is continuous through the point centers, and that the moving part oscillates around that axis of motion. I admit that the point centers are stationary, but I say that in my opinion they come within the general

definition of Knight, because they are similar in character, that is to say, they form a connection between the moving part and the stationary part, on which the moving part oscillates, and the connection is arranged in the same general relation as if it were on the moving part. That I call an axis of similar character, because the result is the same in both cases. If you ask me whether the construction is precisely the same, I reply that it is not. I do
259 not claim that these point centers are moving point centers, but I say that they form a bearing, setting through the holes of the vertical double brace, on which the treadle oscillates.

Q. You used the term with relation to each other. You mean to say that those point centers, which are stationary, have the same relation to the treadle that the trunnions of the Cramer device have, which are cast solid with the treadle?

A. I qualified that statement in my last answer, by admitting expressly that they are different in construction, but they have the same relation as an oscillating bearing or as forming part of an oscillating bearing. They differ in structure. I am perfectly willing to admit that.

Q. Yes, but if I understand you, you are trying to work an axis of motion into those point centers. Am I right about that?

A. I am not trying to work anything anywhere. I am trying to explain that the axis of motion which is in the treadle is continued through the point centers.

Q. Now, is it? Is there any axis of motion continued through those point centers that are stationary?

A. Why, certainly, because the treadle oscillates around and about the point centers.

Q. But do the point centers oscillate around and about anything?

A. They do not, and I have said so a number of times. In that respect they are different from the trunnions of the cannon or the trunnions of a steam-engine, and I have said that a number of
260 times.

Q. And they are also different in that respect from the trunnions of the Cramer treadle, are they not?

A. They are. I have never claimed that they are the same in construction as the trunnions of the Cramer treadle.

Q. Do you know of any instance in mechanics — which a device is called a trunnion unless it itself oscillates or revolves with another oscillating or revolving device which is supported by those trunnions?

A. No, sir; I do not.

Q. You do not know of any mechanical devices similar to a point-center bearing which have ever been called trunnions in mechanical arts, do you?

A. No, sir; none that have been called trunnions. But I know of some that are trunnions, that operate as trunnions, that are point centers. In my testimony, I am usually referring to the thing and not the name of the thing.

Q. These devices in mechanical arts have a name for the purpose

of showing what they are, for the purpose of indicating them from other devices?

Q. Yes, sir. But in patent specifications, they are very loosely used, as you are probably aware. Very few specification writers are careful enough about looking up the accurate meaning of technical terms.

Q. To boil it down, trunnions, as the term has always been applied in the mechanical arts, means something that oscillates and revolves with and is a solid part of some other device which they support and with which they oscillate and revolve?

261 A. This is the general meaning, yes, throughout the mechanical arts.

Q. And in the Cramer patent, devices which he calls trunnions there are arms which are cast solid with the treadle and which oscillate with it, are they not?

A. They are.

Q. Then the thing which he calls a trunnion in his patent is the same thing which is commonly known as a trunnion in the mechanical arts?

A. Yes, sir; except in the mechanical arts trunnions are used in the shape of plain parallel bearings, as in the case of the cannon and the steam-engine. But I think those can be called knife-edge trunnions, although there are terms which would better describe them.

Q. Without regard to the knife-edge. The claim does not say anything about knife-edges?

A. No, sir. But if they were called pivots, for instance, that would express the idea exactly, and there would be no dispute as to what is meant. But he has called them trunnions, and they are trunnions, although, as you will remember, it is only in Knight's Dictionary that we find any approach to a general definition of a trunnion. Throughout the other dictionaries the meaning is confined to the cannon and to the oscillating engine.

Q. You recollect testifying upon these matters before?

A. Yes, sir; several times.

Q. Do you not recollect testifying in that case that there were no trunnions in the Diehl treadles?

262 A. Oh, yes. In that case, as I remember it, we got down to an exceedingly technical disquisition upon whether the Diehl point centers were the trunnions specified in these definitions, and I said they were not.

Q. I will refer you to that place in the testimony. I will read to you from pages 154 and 155 of your former testimony as taken down by the reporter, as follows:

Mr. MILLER: We do not claim, if your honor please, that they are technically trunnions, but what we claim is that they are the equivalents of trunnions.

The COURT:

Q. That is what you say, is it not, Mr. Seely?

A. Yes, sir, certainly.

Q. That you did so testify?

A. And I may say also, if your honor please—is that from the case of Cramer *v.* Fry?

Mr. MILLER: Yes, that is from Cramer *v.* Fry.

A. (Continuing.) When I testified in that case, as I recollect it now, I did not know that even in this Knight's Dictionary there was this general definition of trunnions. I had looked it up in Webster and these other dictionaries, and I had found its meaning restricted to the two mechanical structures named here, the cannon and the steam-engine. It is really only recently that I have become aware that there was a general definition that covered axes of a similar character. If my testimony seems in any way different from that, that is the reason for it.

Mr. WHEATON:

Q. Before reading that, I will refer you to a question that was asked you in the trial of 1898, in which you were referring to the same Diehl patent:

"Q. Then you do not find in the defendant's machine any device that operates as a trunnion operates, do you—that is by oscillating with the treadle?"

263 The COURT: I will allow that question. What was his answer?

Mr. WHEATON: Shall I read the answer?

The COURT: Yes, read the answer.

Mr. WHEATON:

"A. No, sir; I do not."

Q. Do you recollect giving that testimony on the last trial of the case? Not in the Cramer *v.* Fry case, but in the last case.

A. I don't remember specifically that question, but I have no doubt I did. It is certainly what I have said today.

Q. I will ask you that same question now: Then you do not find in the defendant's machine any device which operates as a trunnion operates, do you, that is, by oscillating with the treadle?

A. I do not.

Mr. MILLER:

Q. To save re-examination, just explain right there what you mean by that.

A. I mean that in the Diehl construction there is no trunnion forming a solid part of the treadle and oscillating with it. There is nothing but a hole in the treadle.

Mr. WHEATON:

Q. If there was a projection connected at the end of the treadle and which did not oscillate with the treadle, would that be a trunnion?

A. It would not be a trunnion. In fact, I cannot imagine what

it would be. The part that is connected to the treadle and does not oscillate with it. It would not be a trunnion.

Q. I now place the two points of the cone in the treadle and hold those conical bolts in my fingers and oscillate the treadle. Suppose I do that. Are either of those bolts at this time, during that operation, a trunnion?

264 A. No, sir; they are not trunnions. They are doing what a trunnion does.

Q. How can that be, if the trunnion oscillates and those do not?

A. I mean they are accomplishing the same result as a trunnion. They are not oscillating in themselves.

Q. Suppose the whole result is to get that trunnion to oscillate. Then is the same result accomplished?

A. Then they do not accomplish the same result, but that is not the whole result.

Q. In this Exhibit "E," you see the collars have conical ends, and those conical ends fit into a conical opening in the end of the treadle. That was the old-style treadle, was it?

A. Yes, sir.

Q. What was the objection to that?

A. That the set-screws loosened and let the collars move on the rod.

Q. You had a good deal to say about its wearing, did you not?

A. I don't think I did. I said that the object stated in Mr. Cramer's specification, was among others, that the bearings should be kept a fixed distance apart, and that when those set-screws loosened and the collars loosened on the rod, the bearings were no longer a fixed distance apart.

Q. While the set-screws were tight and the machine in perfect condition, was there any objection to that form of treadle bearing?

265 A. No, sir. It was a good treadle bearing, provided it was centered accurately. But it is pretty hard to center it accurately. And, without having looked at that, I would almost venture to say that those cones have not worn evenly, showing that it was not properly centered. I have not looked at it, and yet I will venture to say that.

Q. What do you say now with reference to its wearing and being objectionable on that ground?

A. (After examining model.) That particular cone is worn very evenly. I have seen them, however, where they were all rough and ragged around one edge, showing that the wear had been greatest there, and that meant that they had not been properly centered.

Q. What advantage, so far as wearing is concerned, have the Cramer knife-edges over these conical bearings?

A. The Cramer knife-edges are not depending upon the set-screw to hold them in place. Furthermore, they are self-adjusting; that is, as they wear, they adjust themselves in their groove.

Q. In that there is no end pressure, is there?

A. No, sir. There is no end pressure on the knife-edges.

Q. In this conical bearing, there is necessarily an end pressure?

A. There is a wedging action upon the cones.

Q. That is the same in the defendant's machine that it is in this old-style conical bearing, is it not?

A. The point centers, you mean?

Q. Yes.

A. Yes, sir, they are conical bearings.

266 Q. And there is the same objection that there was to these old conical bearings. On account of their wearing endwise, that would apply to the defendant's conical bearing, would it not?

A. Oh, no. In the first place, the point centers of the defendant's construction are in the brace and they are always set correctly the first time. In the second place, they are accurately adjustable for wear by means of the screw. In this case, when the wear takes place and the wedging action tends to loosen the set-screw and to force these cones outwardly, they would have to be set up by hand and centered as well as possible. There was a wedging action of them. But in the defendant's construction, they are secured into the lower end of the brace and held there by a nut, and there is but a slight wedging action.

Q. Is there not just the same wedging action in that case as there is in this, Exhibit "E"?

A. Yes, sir; but the result is not the same.

Q. In both cases, when they wear, does it not leave the treadle loose?

A. Yes, sir.

Q. So far as that result of leaving the treadle loose is concerned, they would operate alike?

A. Yes, sir.

Q. In both cases, when that treadle worked loose, you would set up the conical device closer against the treadle, would you not?

A. Yes, sir.

Q. And that would take up the slack that had resulted from its wearing loose?

A. That is the idea, from those collars.

Q. In that respect, the defendants' and this Exhibit "E" operate alike?

267 A. Yes, sir. That is why the cone-pointed screws and these cone-pointed collars are used in bearings exposed to wear, and have been so used for many years.

Q. Now, take this Exhibit "E," and set the cones up close enough to give it an easy play, and while those cones remain in place, is not the treadle of the machines properly made, the two bearings of the treadle, in exact alignment with each other?

A. Yes, it is. If the rod is put straight in the frame, and the legs are in proper position, parallel with one another.

Q. In looking up the state of the art, did you not usually find the frame of a sewing machine made technically, with legs parallel with each other; that is, the two ends of the machine, including the legs, perfectly parallel with each other, and these rods, such as are shown in Exhibit "E," where they are put in, always put accurately in the machine?

A. No doubt, it was intended to so do; but I have seen some very careless setting up *consideration*.

Q. Have you not seen some where it was all well done?

A. I have seen some where it was all well done in expensive machines, very finely made.

Q. In those machines, where the rod was used, as shown in Exhibit "E," that were properly put up, were not the two bearings of the treadle in exact alignment with each other?

A. Oh, yes; and they were also at a fixed distance apart then.

268 Q. But in those cases, the bearing was not in the lower end of the brace bar?

A. No, sir, never. It was their liability to get out of order that constituted the disadvantage.

Q. Any machine is liable to get out of order, is it not; that is, almost any machine.

A. Yes, sir; but if you hang your treadle in your vertical brace, it is not so liable.

Q. Suppose the bearings in the vertical brace are not made true in the first place.

A. Then it would be a defective casting, and ought to be thrown out.

Q. But if it was put in the machine, and the machine put together with those defective castings, as you have seen some in the older machines put together with defective castings, the bearings then in the Cramer machine would be out of exact alignment, would they not?

A. Yes, sir. You are supposing a machine of the old construction of the rod, which is made perfectly at the start. I will assume a construction where the treadle is hung in the vertical double brace, which is also perfect in construction at the start.

Q. In that case, all perfect in construction, the old machines had the treadle bearings, just as perfectly in alignment as they could be in the Cramer machine?

A. Yes, sir; both constructions were perfect. They both started out with the same advantage as to alignment.

Q. In other words, Mr. Cramer was not the first one to apply perfect alignment for the treadle bearings in a sewing machine, was he?

269 A. No, sir. He was the first one to find the means of getting it and keeping it. He was not the first one to find a means of getting it, but to find a means of getting it and keeping it.

Q. You have studied this first claim, I suppose, of the Cramer patent, have you not?

A. Yes, sir, I have.

Q. It calls for the vertical double brace joining the legs of the two ends of a sewing machine. Was it not also the case, that the vertical double brace joined the two ends of a sewing machine long prior to Mr. Cramer's alleged invention?

A. It was.

Mr. WHEATON:

Q. The next question is, "Provided with holes through its lower

extremities to serve as bearings." You understand what that means, do you?

A. I know what I think it means.

Q. What are bearings?

A. Bearings are the two surfaces in contact between a stationary part and a movable part, which moves upon the stationary part. A bearing is the surface of contract on either the stationary part or the movable part. The two together form bearings.

Q. Now, in the defendants' machine, do you find any bearings such as you have described, in the lower extremities of the lower double brace, that is, a place where there is a moving surface, moving in contact with the stationary surface?

A. No, sir, I find the stationary surface in the bottom of the double vertical brace in the defendant's construction.

270 Afternoon session.

APRIL 3, 1900.

Cross-examination of L. W. SEELY resumed.

Mr. WHEATON:

Q. Mr. Seely, we had a good deal to say about the axis of rotation. I have taken the pains to get a definition of an axis from several dictionaries. I will read them to you, and see if you agree with them. This is from the Century Dictionary: "Axis of a cone: A straight line drawn from the vertex to the center of the base." Do you agree with that?

A. Yes, sir; that is not a moving cone, as I understand it.

Q. No. Now, taking the base of a cone, what do you understand by that?

A. The part of the cone of the greatest superficial area on which it rests.

Q. "Axis of a cylinder: A straight line drawn from the center of one end to that of the other." Do you agree with that?

A. Certainly.

Q. "Axis of rotation: The imaginary line about which all the parts of a rotating body turn." Do you agree with that?

A. Yes, sir.

Q. "Axis: The motionless or relatively motionless imaginary line about which a rotating body, such as the earth, turns."

A. That is what I stated before.

Q. Now, this is from Webster: "Axis: The straight line, real or imaginary, passing through a body, on which it revolves or may be supposed to revolve."

A. I agree with that.

271 Q. Now, in the complainant's patent, he says, in the second claim of his specification, "The leather, F, is fitted to the curve of the upper side of the trunnion, which is an arc of a cylinder whose center of oscillation is the lower edge of the trunnion." Is that center of oscillation in that case through the center of the trunnion, or is it the lower edge of the trunnion; that is, the knife-edge?

A. It is on the knife-edge. The knife-edge is the axis of motion there.

Q. That is a considerable distance below the center of the trunnion itself is it not?

A. In the drawing of the patent, it is shown as in line with the bottom of the treadle. They are all one solid piece, so that the rod which appears to pass beneath the part marked "A," is really the bottom of the treadle. They both move as one, and are made solid in one piece.

Q. Well, the fact is in that case that the center line of the trunnion is not the axis upon which it rotates. Is that correct?

A. The knife-edge is below the center line of the trunnion. The knife-edge forms a segment of a cylinder.

Q. And the axis of rotation is where the knife-edge rests in the bearing?

A. It is at the point of junction, between the knife-edge and the groove in which it is seated.

Q. We were speaking about the holes through the lower extremities of the vertical double brace. In the first column of the specifications, it states, "B represents the two trunnions cast as a portion of the treadle, and extending from its sides into loop-holes in
272 the common cast-iron cross-brace, C. These trunnions are sharpened to an edge or corner along their lower sides, and the lower end of the loop-hole is hollowed to an angle more obtuse than the edge of the trunnion, to serve as a bearing for the same, and permit the rocking motion common to treadles." In that case, Mr. Seely, where is the bearing in which the trunnion rests?

A. It rests in the obtuse angle groove in the loop in the vertical brace.

Q. And in order to comply with that description, it is not absolutely necessary that the bearing of whatever supports carry the treadle, should be in the lower extremities of the vertical cross-brace?

A. I think so.

Q. Does or does not the specifications of this patent describe those holes through the lower extremity of the cross-brace as being fitted to serve as bearings, or at least, does it not describe the office which they perform as that of serving as bearings?

A. Yes, sir; it states that the trunnions are sharpened along their lower side, and the lower end of the loop is holloved to an angle more obtuse than the edge of the trunnion, to serve as a bearing for the same, and permit the rocking motion to treadles.

Q. That hole in the lower extremity of the cross-brace?

A. In the lower extremity of the cross-brace.

Q. And when the specifications speak of a treadle provided with trunnions fitted to oscillate in said bearings, is it true or not that the working bearings of both surfaces—that is, that of the trunnion, and that of the lower edge of the hole—must be in the cross-brace?

273 A. Yes, sir; they must be in the cross-brace.

Q. In the defendant's machine, do you find any hole through

the lower extremity of the lower double brace that is fitted to serve as a bearing, and in which there is any trunnion fitted to oscillate?

A. No, sir. As I have stated before in this examination, I find a reversal of those parts. I find the stationary part of the bearing, which is a bearing in the hole, and I find the movable part on the treadle, or forming a part of the treadle. The positions of the parts are reversed, but the bearing is in the hole, because the point screw is a bearing, as I stated this morning, and it is in the hole. I stated that a bearing might be either the stationary part, or the movable part, and that the dictionary so defined it. And with that in my mind, I state that the bearing in the defendant's machine is in the hole, because the pointed pin there is a bearing, and it is in the hole.

Q. Do you find any other locality described for that bearing to be placed, and for the trunnion to oscillate in other than the hole through the lower extremity of the vertical brace?

A. I do not.

Q. In the defendant's machine, do you find in the lower part of the double vertical brace, a hole through the brace with any kind of a treadle bearing fitted to oscillate therein?

A. No, sir; I do not. I find that the stationary part of the bearing is in that hole; the part upon which the treadle oscillates. But I do not find, of course, that the part projecting from the treadle is in the hole.

274 Q. Let us see if that is so. In the defendant's machine, are used these conical-pointed screws for the treadle to oscillate upon, are they not?

A. Yes, sir.

Q. What constitutes the bearing in that case?

A. The point of that screw, together with a socket in the edge of the treadle.

Q. Now, is the point of that screw in the defendant's machine in the hole that passes through the lower extremity of the vertical brace?

A. No, sir, it is not. The point is on one side, and the other end of the screw projects from the hole on the other side. I only said that the screw was in the hole.

Q. Did you not state that that bearing was in the hole?

A. Yes, sir, and I was perfectly correct when I stated it. I said that the stationary part was a bearing—the part that you now hold in your hand. I stated that it was in the hole. I do not mean technically that the absolute point of that is in the hole, but that the piece of which that forms a part is supported in the hole, and that the point projects from the hole. The hole is there to hold it.

Q. That is, you mean that the screw part of this conical-pointed screw is screwed into a hole that passes through the lower extremity of the brace?

A. Yes, sir; and projects through it toward the treadle, just exactly as the trunnion projected outwardly from the treadle in the Cramer machine.

Q. Do you undertake to say that is a bearing, that is, where
275 this screw, the conical-pointed screw, rests in the threads or hollow screw that is cut through the hole of the vertical brace?

A. I do not. I always said that the construction of that bearing was different. I do not go any further now than to say that the bearing is supported in the hole, and projects from it toward the treadle. It is a reversal of the Cramer construction, in which the trunnion projected from the treadle towards the hole.

Q. I want to see whether you undertake to call it a bearing, where this point screw passes through and rests in the hole through the vertical brace?

A. Oh, no. The bearing surfaces in this case are in the treadle instead of in the hole. That is caused by the reversal of the parts to which I have before referred.

Q. How much of that pointed screw constitutes the bearing in the defendant's machine?

A Practically only the point.

Q. Since that point is not in the hole through the vertical brace, why do you keep saying, if that is the bearing, that the bearing is in that hole?

A. I say so because I believe the two things, although different in construction, to be practically the same; to be absolutely the same in operation; and also because that point center which has the bearing on the end of it, is in the hole, and the hole is made there to hold it. I do not say that the bearings are in the hole. It has been turned around, and the bearings are in the treadle.

Q. The upshot of the whole thing is simply that there are no holes through the lower extremities of the vertical brace in
276 the defendant's machine that are adapted to serve as bearings and in which there are trunnions or any other device fitted to oscillate? Is that true or not?

A. That is true. I never claimed that there was.

Q. What devices, if any, are mentioned in the second claim of the Cramer patent, which are not mentioned in the first claim.

A. Cushion F, and the block *f*.

Q. Supposing that cushion F and the block *f*, were taken out of the plaintiff's patent; would there be anything then to confine the trunnion bearings in their proper location?

A. While in operation, pressure of the foot on the treadle would hold them there.

Q. Do you think that with the cushion F and the block *f* entirely left out of the Cramer stand, that it would be a salable stand, one that would go into use at all, in competition with other machines of other construction?

A. Possibly not, because it would be very easy to lift the treadle out by hand, but I want to say in relation to that block, that that has always been a very common device, to keep a knife-edge bearing in its seat. It was not Mr. Cramer's invention. You can find it in the art before his patent for the same purpose. The treadles are put in these elongated loops, and it is good mechanics to put

something in there to hold them on their seats. It had been done before in sewing machines.

Q. It was well recognized prior to Mr. Cramer's alleged invention, that it was necessary, where a knife-edge bearing was used as a bearing, that something should be placed over it to hold it in place while it was in use, was it?

277 A. Yes, sir; I think so; and I think Mr. Cramer must have known that at the time he disclaimed knife-edged bearings. It all forms a part.

Q. Where does he disclaim any knife-edged bearings?

A. Page 1 of the specification, claim 2, lines 84 to 87.

Q. You refer to this part: "I am aware that sewing-machine treadles have been provided with V-shaped bearings, and I do not claim the same as my invention." Is that what you refer to?

A. Yes, sir, that is a disclaimer.

Q. He nowhere disclaims the cushion F and the block *f*?

A. No, sir; but, taking your view of the case, that the cushion F and block *f* were necessary parts of a knife-edge bearing, when he disclaims a knife-edge bearing, I hold that he disclaims the other parts, too.

Q. In all conscience, what has he got left in his patent, then?

A. He still has his treadle in the cross-brace.

Redirect examination of L. W. SEELY.

Mr. MILLER:

Q. Upon your cross-examination, you stated, in answer to a question by the counsel, that in mechanics you could not always determine the nature of a device by mere name which was given to it. You further stated that you knew of certain things in mechanics which operated after the manner of a trunnion, but were not called trunnions, or known by that technical name. Mention some of those things.

278 A. I mentioned one in my direct testimony. The balance-wheel of a watch: That has pivots, or projections from each side of it, at the center, which oscillate in the bearings formed in the jewels. They are oscillating bearings, and they might perhaps be called trunnions; but, as I said, the watch-maker would never call them trunnions.

Q. They are not known by the technical name of trunnions?

A. Not known as technical trunnions. Taking the steering center of a bicycle, for instance, which are cone-shaped points upon which the wheel oscillates: They might perhaps be called trunnions. They are not known as trunnions.

Q. That is, under the broad definition given by Knight, but they would not be, in ordinary acceptation, called a trunnion?

A. I should not call them a trunnion; but under a definition which is general enough to include axes of a character similar to trunnions, perhaps you might call them trunnions.

Q. They operate substantially as a trunnion does?

A. Yes, sir.

Q. It does not make any difference what name you give to them—the thing is there?

A. Yes, sir.

Q. You were also asked about cases in mechanics where there was a reversal of parts; that is, where one part was taken from one locality and interchanged with another. Can you mention any instance illustrating that point, showing there is no difference in a mere reversal of the parts?

279 A. As simple an illustration as I can think of now would be a common hanging for a gate. Take a gate post, and put two screw eyes in it, at a proper distance apart. Then take a gate provided with what would be called pintles in that case, and set them into these screw eyes, and the gate would hang there. Take your pintles and secure them to the gate post standing upright, and put the screw eyes on the gate, and drop them over the pintles, and the gate will hang in precisely the same way, although the parts have been properly reversed.

Q. So that in one case, the screw eyes would be on the gate post, and the pintles on the gate; and in the other case it would be the reverse, the screw eyes on the gate and the pintles on the gate post?

A. Yes, sir; in the one case, the screw eyes would be the moving bearing; and in the other case, it would be *vice versa*. The pintles would become the moving bearing.

Q. How is it about the rudder of a boat?

A. Since you ask that, I cannot remember at this moment, and I suppose I ought to be ashamed to say so, whether the screw eyes are on the stern of the boat, or on the rudder. I know that on one part or the other, there are two of those screw eyes, and on the other part there are two of those pintles, and they are caused to engage and the rudder oscillates.

Q. Does it make the slightest difference in a device where those are located, one to the other?

A. It cannot possibly make any difference. Still I ought to know which one the screw eyes are on.

Q. In regard to the alignment of these old machines, where the devices used consisted of the cone collars in set screws: Can

280 you mention any fact showing the difficulty in getting that alignment in the first place, and preserving it after it was once gotten, if it was gotten?

A. Yes, sir; there is difficulty in getting the alignment. I believe, in giving my testimony, we were imagining that those difficulties had been overcome, and that we had a perfect alignment, and I said in that case it was a good bearing. These cones are held by a single set-screw passing through one side. This bears on the shaft or rod, and the effect is to pull up on one side of the cone tightly against the rod, and tends to have the other loose. Unless they are adjusted with extreme care, they will not be exactly in the center, and that is probably the reason why an effect like this is produced (illustrating).

Q. What effect is this?

A. The cones are worn to a ragged edge on one side, showing that the collar was not correctly centered.

Q. Suppose that the cone collar did not exactly fit the rod; would any difficulties be met with then?

A. Yes, sir. When the set-screw came to bear againt the rod, the cone would probably not be in the center. Then also, with these cones, the pressure is on the top, and that tends to wear them unequally in one place, of course.

Q. In that device which you hold in your hand, which is an old rod, with old cone collars on them, do you find that the collars have been worn unevenly.

A. Yes, sir; they are worn to quite a ragged edge in places, and comparatively smooth in other parts of the edge.

281 Q. Please pass that over to the jury, and let them examine it, so as to see how those cone collars wear in actual practice. What is the result when a wearing of that kind occurs uneven?

A. The treadle would rattle and shake, instead of remaining tightly in its bearings, where it ought to be.

Q. Get out of alignment?

A. Yes, sir; get out of alignment, and the bearings no longer remain at a fixed distance apart. That is caused by the loosening of the cones on the rod.

Q. What would be the difficulty in keeping a machine of that kind always in alignment?

A. The difficulty is, in keeping these cones properly centered and at the right distance. The adjustment is very clumsy. It is necessary to loosen the set-screw and push these cones on the rod by hand. An inexperienced person will find it very hard to make the adjustment just exactly right. I have seen it so in a sewing machine in my own house.

Q. When those cones get out of line that way, and where the operator would have to try and adjust the machine over again?

A. Yes, sir; probably he would not send for a sewing-machine man to do it; he would loosen the set-screws, and push the cones up to about the point that he thought was right, and then set the screws again. Sometimes he might get it right, and sometimes he would not.

282 Recross-examination of L. W. SEELY.

Mr. WHEATON:

Q. According to your ideas, the shaft upon which a grindstone is hung, would have trunnions for its two ends, would it not?

A. Well, I think trunnions refer more to an oscillating bearing than to a rotary bearing. I should not call them trunnions. They operate like trunnions.

Q. Every shaft which carries belt pulleys or gear wheels would be trunnions, according to your idea, would it?

A. No, sir. I think a trunnion is strictly an oscillating bearing.

Q. Those oscillating bearings cast or made solid, with the device

which they support: Is that not the case, as far as you know mechanics?

A. In trunnions, yes; technical trunnions are usually made that way. By the way, I want to ask permission from you to give a definition that I found in regard to the axis of oscillation.

Q. Very well. Give it.

A. It is from the Standard Dictionary: "Axis of oscillation: A straight line passing through the center about which the body vibrates at right angles to the plane of motion." I stated, and I fear you did not agree with me, that I thought the axis of motion, or oscillation, passed through the point centers in the defendant's construction, and continued on through the treadle. I think that under this definition, I was right, because, if the axis of oscillation is a straight line passing through the center about which the
283 body vibrates, then that straight line passing through the point screw, which is the center about which the treadle vibrates, is the axis of oscillation. I want to put myself straight upon that point, because you had some definition about axes, and I have found this in the Standard Dictionary.

Q. Nothing different from that. I was finding fault with your statement, as I understood it, that the center of motion was directly through the center of the shaft, without regard to where the motion was or oscillation. All these differences between knife-edge bearings, conical bearings, and journal bearings, were all well known to mechanics long prior to 1880?

A. Yes, sir; and forty years before that, I should think.

Q. The difficulty of adjusting conical bearings in exact alignment was known then, as well as it is now?

A. I should think so, yes. You mean cone and set-screw bearings?

Q. And also the advantage and disadvantage of knife-edge bearings were as well known forty years before 1880 as they are now?

A. Yes, sir; bearings were all well known and equivalent to each other.

Q. Then, a person making up a machine, had simply to choose the devices which he preferred for bearings amongst all these different ones?

A. Yes, sir; it was the process of selection, not of invention.

Q. He would know, while he was making his choice, just
284 as well what the effect of each bearing would be, as he would know after he had selected that bearing and applied it to use, would he not?

A. He should, if he was a good mechanic.

Q. Then, it would be utterly impossible that there should be anything in the shape of invention in the mere selection of those devices for particular use, would it not?

A. That is just what I think, Mr. Wheaton. There is no invention. It is simply selection from among well-known materials which are equivalents for one another. I should like to say this: That my remarks about the difficulty of adjustment of those cones applied only to cones which are fastened by set-screws upon the tie-

rod. You have alluded to the point center of the Diehl construction as a cone, several times, but that is not the cone to which I was referring.

Q. Is it not true that a shaft hung on these point centers will wear on the top of the point center and on the inside of the upper part of the opening in which that point center fits?

A. Yes, sir; there is an adjustment provided to take that wear up by turning the screw in.

Q. In setting the screw up, it would be worn away on top, would it not, while the opening in which it was fitted would also be worn away on the top of that?

A. Yes, sir; the points where the weight came.

Q. While the under part of the cone as well as the under part of the opening in which it was inserted, would remain without being worn, would it not?

285 A. Not entirely so. As you know, the principal wear on the shaft is at the point where the weight comes. I had a good deal of experience with cone bearings in the early days of the bicycle. The weight would come there, as you suggest. These were adjustable cones, and we could turn them up and compensate for that wear, to a certain extent, and which is done with that point screw you have in your hand.

Q. Where they had worn so as to rattle, you could not move up that point center, could you, and make it fit in the opening that was worn into which it was inserted?

A. Yes, sir; you could, unless the point center bore against solid metal.

Q. That opening would not be in circular form after it was worn out of circular form?

A. No, sir. After long use, it would lose its circular form. I take it that those are hardened points fitting in hardened sockets, and there is very little trouble of that sort with the bearing you have in your hand. Technically, you are correct.

Q. It was as easy to make these conical collars of hardened material and avoid wear, as it would be if you used point centers and made them harder?

A. The difficulty is in the means of attaching them to the rod by the set-screw. That is where the trouble comes. The set-screw attachment is very ineffective; while the screw connection of the point center makes a very good adjustment.

Q. Still, they were not so inefficient but what they were used in thousands piled on thousands of cases, and successfully used?

A. Yes, sir; because there was nothing better.

286 Further redirect examination of E. W. SEELY.

Mr. MILLER:

Q. In view of the fact that it is true, as suggested by Mr. Wheaton, that at the time of Cramer's invention, it was a well-known fact that point-center bearings, and knife-edge bearings, and other kinds, were all old and well-known equivalents, one for the other, and

that a man had a right to select any one of those when he put it in his machine; in view of that fact, what new feature do you find in the Cramer construction which was not exhibited in the prior art?

A. Since there could be no invention in any particular form of bearing that was used, it is evident that the invention must reside entirely in the new location of the treadle; that is to say, in the holes at the lower end of the vertical double brace.

Q. In that view, it made no kind of difference what bearing was used, so long as appropriate bearings were used, to cause it to operate?

A. No difference at all, so long as they were placed in that new location in the machine.

Q. The treadle was hung in the brace?

A. The treadle was hung in the vertical double brace, instead of on the rod.

Further recross-examination of L. W. SEELY.

Mr. WHEATON:

Q. Do you undertake to say, Mr. Seely, there could be any invention in merely extending the lower extremities of the vertical double brace down lower, and hanging the treadle in that?

287 A. Not unless some new result was produced. What I have been testifying about was the new result that is produced.

Q. Wait right there. Would there be any new result in the world produced in the action of this new Cramer machine now before you, if the extremities of the brace were carried down, and the treadle hung in them, by the same means that that treadle is not hung in the web of the legs?

A. I have never examined that machine, and I do not understand its construction exactly.

Q. You understand the construction and the operation of the stand of this Cramer machine?

A. It seems to me that, with that machine, the effect ought to be about the same as if it were hanging in the brace. It is hung in a one-piece casting at both ends, which is separate from the legs and separate from the tie-rod. I think that is a good construction.

Q. Would there, in your opinion, be any new result produced in this stand of the Cramer machine, by extending the extremities of the vertical double brace down lower, and then hanging the treadle in that double brace by exactly the same means by which it is now hung in this stand?

A. I do not think there would be any new result produced. It would be a better construction, of course, to carry the brace down and have it serve both as the connection between the legs and as the treadle support. I think that casting there will hold the treadle in line.

288 Q. Take any of the other machines that were good, practical machines, that had this double brace: Could there be any new result produced in the action of the machine, or in any of

its parts, by merely continuing the extremities of the vertical brace lower down, and then hanging the treadle in that brace by exactly the same means in which the treadle was hung in the legs?

A. A very decided difference and advantage and new results.

Q. Would there be any new result in action?

A. There would be no new result in the sewing-machine operation, if you mean that, but there would be an improved result in action, owing to the fact that the treadle is supported in a better way, in better alignment, and is not loose on its collar as before.

Q. I am speaking of machines which were put together right, and in which the alignment was perfect.

A. I have stated that in such a machine, at the start the treadle will operate just as well as in the Diehl machine, where it is hung in the brace. It is the liability of those bearings to get loose that constitutes the objection to them, that Mr. Cramer's idea was not to make the bearing correct and accurate, but to keep it accurate also.

Q. And the action of all these different devices in all respects, both as to wearing and as to not wearing, as to keeping in alignment and not keeping in alignment, all those things were perfectly well known for forty years before 1880, were they not?

A. I think so. But the remedy had not been found for them. They still went on, year after year, making thousands of
289 thousands of machines, and mounting them on that tie-rod with these old cones, the disadvantage of which was well known, then they tried to mount them in the legs, or web, and there were disadvantages in that, too, and other thousands of machines were made that way. And very likely are made yet. I believe they are. The remedy, in my opinion, had not been found until Mr. Cramer put his treadle in the brace of his machine. There is no doubt that when it put in the brace, all these disadvantages are obviated, as in the Diehl machine.

Q. Do you believe there is a manufacturer today that would take Mr. Cramer's device, or that does take it, now that his patent has run out, and they have a perfect right to it, would take it and use it under the circumstances?

A. I think I know just what the manufacturer would do. He would look at that patent, and he would say: "Here is the proper place to hang that treadle; now, I don't like his bearings; what are we using? We are using point-center screws in the legs. Let us take our point-center screws, and substitute them in the brace for these bearings that he has put there that we do not like, and we will have our treadle in the brace with our own bearings, and we will make a good device of it. I don't think much of the construction he has got, but his invention is all right."

Q. Can you tell us why it is that, since Mr. Cramer's patent has run out, there is not a single sewing machine to be found with his device as he has described in his patent, incorporated in it?

A. His patent has only run out a few days. Perhaps there will be some. It is only recently that people have had a chance to make it.

290 Mr. WHEATON:

Q. Suppose you were a sewing-machine manufacturer today: Would you take Mr. Cramer's construction there, with that block and cushion, and the whole thing as he has described it in his patent, as a free gift, or use it at all.

A. Assuming, as we have all along, Mr. Wheaton, and we both agreed upon that thoroughly, that all these bearings were equivalents, and there is no novelty in any of them personally, I prefer the Diehl point centers to Cramer's knife-edge bearings, and I think the Singer Company made an exceedingly good construction when they used the point-center bearings in the cross-brace. I prefer it myself, but some people might prefer the knife-edge bearing. That is a good bearing, too. I think I should do just what the Singer Manufacturing Company did, but I should keep my treadle in the brace.

A JUROR:

Q. I understood, in the early part of your testimony, you said that the treadle had previously been hung in the center brace before Mr. Cramer invented it; is that correct?

A. Not at all. I said that it had been hung on the rod in the legs of the machine.

Q. But it never was hung in the cross-brace until Mr. Cramer did it?

A. Yes, sir; Mr. Cramer was the first to do that.

Mrs. E. S. ABBOTT, called for the plaintiff, was sworn, and testified as follows:

Mr. MILLER:

Q. What is your relationship to Mr. Cramer, the plaintiff?

A. He is my father. I reside in Sonora, Tuolumne
291 County. The other members of the family in 1880 were one brother, H. Cramer, Jr., and a sister, who is at present Mrs. Brill, besides myself and my father and mother.

Q. Do you remember the circumstances concerning the getting up of this device in sewing machines by your father?

A. I do. I remember the greater part of it. Ever since I can remember, he worked on patents. Always working on patents. He had a workshop in Sonora and used to work in that shop.

Q. Was he connected in any way with sewing machines prior to the time when he got up this one?

A. Yes, sir; selling them and repairing them, in Tuolumne, Mariposa, Calaveras, Stanislaus, and some in San Joaquin.

Q. Do you remember any circumstances in connection with this getting up this machine that you were not connected with, that calls it to your memory?

A. I drew out the paper models. The patent was made from that, and sent to the Patent Office. I drew them on paper, and traced them on to the card-board, and cut them out. My father asked me to. I assisted him in that way.

Q. Are these the paper models here that you refer to now? Here is one. Is that one of them?

A. Yes, sir. That represents the brace.

Q. What date do you find on that paper?

A. June, 1880.

Q. Is that the time that it was made?

A. To the best of my recollection, yes.

292 Q. And you cut that out from the pasteboard under his direction?

A. Yes, sir.

Q. Here is another one. What does that represent?

A. That represents the treadle, to go in connection with the brace.

Q. Here is still another one: What does that represent?

A. That represents the treadle as well, to work in connection with the brace.

Q. Here is another piece of pasteboard, with a representation of something on it that has not been cut out, but has pencil marks on it: What does that represent?

A. The brace.

Q. What date is on that one?

A. June, 1880.

Q. Here is another pasteboard, with another representation and pencil marks on it: What does that represent?

A. A part of the leg of the machine.

Q. Was that made about that time also?

A. Certainly.

Q. Here is another paper model: What does that represent?

A. That is one of the legs of the model.

Q. Did you cut that out for him, too?

A. Yes, sir, I did.

(The models referred to (six in number) were placed in an envelope together, said envelope being marked Plaintiff's Exhibit "T.")

Q. Now, Mrs. Abbott, after you got models and things drawn out and made in June, 1880, as you have stated, what did your father do with regard to making the machine?

293 A. Went to work and made machines after that model, after the style of the drawing.

Q. Do you remember where it was that he made the first machine?

A. Right there at home, in Sonora. He made it himself with his own hands at his workshop there. I don't remember what became of that first machine. He made other machines after that, of the same kind. I believe he sold most of them. I don't know but what he sold all of them.

Q. In what way did you or the other members of the family assist him in regard to the disposition of those machines?

A. I at the time did most all of his writing; in fact, all of it.

Q. Did you write these letters which have been offered in evidence here as having been sent to the Singer Manufacturing Company?

A. I believe I wrote them all.

Q. In regard to the sales of these machines by your father: Did he have a store at which he sold them?

A. Besides having his workshop, he had an office, you might call it, in the front part of the house, and he also went out with a horse and wagon to take the machines through the country.

Q. Did his son assist him with it in any way?

A. Yes, sir.

Q. Did they sell machines of this style, that were gotten up by him?

294 A. Yes, sir, until the stock of treadles run out. Then they got rid of those on hand before having any more patent treadles manufactured.

Q. Are you somewhat familiar with the operation of sewing machines, from the experience you have had with them?

A. Somewhat.

Q. Do you know what satisfaction these machines gave, that had Mr. Cramer's patent treadles in them, that he sold?

A. They all gave good satisfaction. I am certain of that. Some of them were used around Sonora by the different people. I used one myself for ten years steady.

Q. How was it in regard to its ever getting out of alignment?

A. I never knew it to. I took in sewing. I used it constantly. It always gave perfect satisfaction. I never heard of any complaint from the people who had used them around Sonora, or anywhere else.

Q. Did you write letters for your father to any other sewing machine company besides the Singer Company regarding this matter?

A. Yes, sir, I believe I did; in fact, we kept copies of every letter I wrote regarding the patent. You can easily tell by reference. I wrote many letters about the matter. Of course, being a child as I was, I did not keep account of it. All that we have are the letters that we kept copies of.

Q. Do you know whether these Cramer machines, with the patent treadle on, sold for any higher figure than the old-style machines?

295 A. $5, generally. I don't know whether any were sold for less or not. I do know that some were sold for $5 more.

Q. What were these old-style machines that your father had been selling prior to getting up this invention?

A. He sold some of most every kind of machine, but the American he made a specialty of. In the American machine, the treadle worked on the cross-rod that connects the legs together.

Q. Did you ever see the old-style machine in which the treadle was mounted upon the tie-rod by means of these conical hollows and set-screws?

A. I believe I have.

Q. I will show you a rod with some set-screws and cones of this kind. Did you ever see a machine in which the treadle was mounted on the rod, and held in place by these cones and set-screws?

A. I have; in fact, I have tried to tighten them myself. I can seldom get them just right. I would tighten them because the treadle would rattle and make a noise. The machine would not run steady unless the treadle was steady. The stitches would not be just right. It would be bad sewing. I would get down and try to tighten up those cones and set-screws.

Q. What machines were they that that construction was used on before Mr. Cramer's?

A. I don't know what machines, because I have run so many different kinds. I am pretty sure that was on the American sewing machine.

Q. That, you know of your own knowledge, was liable to the difficulties which you specify?

A. Yes, sir.

296 Q. If the machine should get out of line in that way, what would be the damage that would be done to the same?

A. I don't know. It would not make even stitches, and of course the noise would be very annoying, where you have to run a machine quite rapidly. It would rattle. I took in sewing for about ten years steady, off and on, at Sonora, and performed the work upon this machine that I have been referring to.

Cross-examination of Mrs. E. S. Abbott.

Mr. Wheaton:

Q. Mrs. Abbott, about how many of the letters which you wrote to sewing machine companies were ever answered, as far as you remember?

A. I could not say. I never tried to remember. I know that some were answered.

Q. What was the nature of the letters that you wrote generally to the sewing machine companies? Just state the substance, as near as you can.

A. Trying to tell them what the patent was, that it consisted of a treadle working in connection with the brace, and trying to show them the advantages in that over the other, and trying to get them to adopt it.

Q. Did you ever get any letter back in which the parties wanted to adopt it?

A. Not directly, no. They did say that they would examine it, and if they saw any advantages in it over their own, they might adopt it; something to that effect. That was the answer that the Singer Company sent.

Q. Did any of the other companies make any proposition at all for adopting it?

A. I won't be too sure.

297 Redirect examination of Mrs. E. S. ABBOTT.

Mr. MILLER:

Q. What do you mean by that, Mrs. Abbott, that you won't be too sure?

A. That I would not recollect to a certainty whether they did or not.

Q. Do you recollect anything about the time the Singer Company came into Sonora and entered into some negotiations with your father regarding it?

A. I remember hearing him speak of it, my father, that this agent had come there and asked about it.

Recross-examination of Mrs. E. S. ABBOTT.

Mr. WHEATON:

Q. Mrs. Abbott, in whose handwriting are the marks on these paper models?

A. In my father's, I believe; they are not mine.

Q. Do you know when these marks were put on there?

A. When I drew the treadle, when I cut them out.

Q. Which one of these, if either of them, contains the suggestion of the large opening through the lower extremities of the treadle brace and the putting in of the cushion and block?

A. I was not supposed to draw that on it. That was supposed to be done in casting it. That was just simply the drawing or pattern. I could not very well put the opening in a piece of card-board the way it ought to be. Is there not an opening drawn in the lower part of that? It was to come right along at the bottom of the brace here. Of course, the hole is not cut in; I could not do that very well.

298 Q. Of what manufacture was the machine in which your father put his invention and which you used for ten years?

A. The American. In fact, I have used different heads on the same treadle—different sewing machines on the same treadle. I now have one at home with a Wheeler & Wilson head on. I find it is a benefit, or a great improvement, over the other treadle, no matter what kind of a machine you are using. It was the patent treadle here, the stand that my father invented. My father put his patent treadle in some stands already in existence. He took the brace out of those stands, and put the new brace and new treadle in.

Q. Did he put it in any other than the American stand?

A. Yes, sir. He had all sorts of second-hand machines on hand. You could take the legs of almost any machine; it would not make any difference what sewing machine the legs belonged to, it did not affect the brace and treadle.

Q. Do you know what different kinds besides the American stand he used?

A. No, sir; I could not say, because he had second-hand Singers and Domestics, and Davis—in fact, almost every sewing machine

that was sold at that time—on hand. He used to sell the American, and would take the other kinds in exchange. He would take them and make them an allowance.

C. A. CHANDLER, called for the plaintiff, was sworn and testified as follows:

299 Mr. MILLER:

Q. Mr. Chandler, what is your business relation with the Singer Manufacturing Company?

A. I am general agent for this coast, located at San Francisco. San Francisco is the head office of the Pacific Coast division. I have charge, as manager, of that office.

Q. Do the other agencies, or branches, make reports of the sales of machines to you directly?

A. They are addresed to the company at the office, not to me personally. They pass through my jurisdiction.

Q. How long have you been connected with the Singer Manufacturing Company?

A. Between nineteen and twenty years. I am familiar with the style of machine that has been sold by the Singer Company and which has been referred to here as the Diehl machine.

Q. What is the technical name that is given to that machine in the company's books?

A. I don't know, sir. We have a stand number, but I cannot recall what that number is now.

Q. The circulars here will perhaps refresh your recollection. I will show you one of them. Here is a picture of one of these machines in the Singer Company's catalogue of 1889, on page 7. I believe it is marked therein, "Improved Family machine," is it not?

A. Yes, sir, but that refers to the head, Mr. Miller.

Q. The head is a part of that machine, is it not?

A. Oh, yes. That is the Improved Family machine. I thought you asked me about the stand.

Q. The stand is part of the machine. is it not?

300 A. Yes, sir.

Q. What is the abbreviation that you use to distinguish that character of machine that is represented in that picture?

A. "I. F." That stands for "Improved Family." That is the abbreviation in use at the time that catalogue was issued.

Q. Here is another one on page 9, entitled "Vibrating Shuttle No 2 machine." What is the phrase you used in your books to represent that, for brevity?

A. "V. S." That stands for "Vibrating Shuttle." So far as the stand is concerned, that is similar to the "Improved Family."

Q. What other machine did you sell that had also the same kind of stand as these two that we have been referring to?

A. A chain-stitch machine—an automatic machine. The abbreviation for that is "A. C. S." It is on page 15. That is headed "Automatic Chain-stitch machine." So far as the treadle part of it

is concerned, that is the same as the other two. The standard machine sold by the company, of which they sell the largest quantity here, is the "Vibrating Shuttle machine," the "V. S." machine. The company has sold a good many of those, I suppose, and also the "Improved Family machine."

Q. On this circular that is marked Exhibit "N," you have a machine that is numbered "Machine No. 15," and another one, "Machine No. 27," and another one, "Machine No. 24." What do those numbers mean?

A. That is a new way we have of disignating the head. The No. 15 takes the place of the old "I. F." It designates the oscillating-shuttle machine. No. 27 designates the "V. S.," or vibrating-shuttle machine. The automatic is now numbered 24.

301

Q. All these machines which I have referred to here have the Diehl arrangement for mounting the treadle, have they?

A. Yes, sir.

Q. Mr. Chandler, are you able to give us any idea as to how many of these machines have been sold by the Singer Manufacturing Company in this district, say for six years prior to 1896, which would be commencing with 1890, which contain this arrangement known as the Diehl arrangement for mounting the treadle?

A. The books of the company here at San Francisco ought to show. Those books are under my control. But you will understand, Mr. Miller, that I have but just recently taken charge of the central office, only since last October, and I am not entirely familiar with their methods of keeping their records in those years.

Q. You know that one method was that all the agents should make a weekly report to the central office of the number of machines they have sold during that week, and those reports were made in duplicate and one of them sent to the central office, and another to the head office in the East, and still another retained by the branch office itself?

A. That came from the branches, yes, sir.

Q. What I want is this: I want to get the reports of the branches to the central office, showing the sales of those different machines that we have mentioned here, if you have them, and if you can get them. If you have not, bring me the sales books for those different years, and I will get the numbers of the machines from those sales books.

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A. I was served with a subpœna today calling for those books, and I will bring them here tomorrow.

Q. Very well. That is certainly all I could ask for, Mr. Chandler.

WEDNESDAY, *April* 4, 1900.

A. C. BROWN, called for the plaintiff, was sworn and testified as follows:

Mr. MILLER:

Q. What is your present business?

A. Embroidering and expert operating on sewing machines. I

have been connected with sewing machines, in one way and another, about twenty-seven years. I have been connected with the Domestic Company, Wheeler & Wilson, the Singer Company, the White Company, the New Home.

Q. During your experience of twenty-seven years, have you had occasion to examine into the modes and operations of different styles of sewing machines?

A. Yes, sir, very much so. I have become quite familiar with all the mechanism of a sewing machine.

Q. When were you connected with the Singer Sewing Machine Co.?

A. From the year 1887 to 1890. I was an expert operator and specialist; fancy operating at New York city, Philadelphia, Boston, London, England, showing the fancy and skillful working of the machine, explaining the fine points of improvement and mechanism about it; those things that were of great advantage.

303 Q. In the year 1880 and prior thereto, what style of sewing machines were on the market, with regard to the modes of mounting the treadle?

A. They were placed on a rod usually, with cones at the end of the treadle, the treadle worked on cones, cones being on rod, the cones held in place on the rod with a set-screw.

Q. By the use of that expression "cones," do you refer to those conical collars that surround the rod?

A. Yes, sir; that fit into the ends of the treadle, the treadle working on those cones.

Q. How were those cones fitted into the treadle?

A. They fitted into a socket made in the treadle to conform to the same shape as the cone. The end of the collar was cone-shaped, that fitted into a socket in the treadle, and that cone was held in position by a set-screw.

Q. Just look at one of these models here, and say if those are the kind of cones which you have been referring to.

A. Yes, sir; that is the cone I have reference to. That was the popular idea at that time. It is used yet.

Q. State if there was any difficulty in that style with regard to keeping the treadle bearings in perfect alignment.

A. There was a great deal of difficulty. First, the set-screw would become loose from working. That would necessitate closing this up and taking up the lost motion. This becoming more or less worn, loose on the rod, as most of them are, it would throw it out of alignment on account of it being thrown to one side, or probably not in the same place that it originally had been.

304 Q. What was the result when those things got out of alignment?

A. Heavy running and noisy. The noise would be occasioned by lost motion, and the heavy running would be caused by friction, uneven bearing.

Q. You noticed that defect in that style of machine, did you, at that time?

A. Very decidedly. It was a thing that we had a great deal of

trouble with, always tightening that up. The only thing to do was to loosen that set-screw, push it up, and take up the loose motion for the time being; but it would soon get loose again. It was a constant source of annoyance, that is my experience. I had considerable experience in that line.

Q. What other methods of mounting the treadle at that time were in use, if you remember any?

A. They had a kind of knife-edge bearing. The knife-edge would be on the treadle, and that would be set on the rod, held in its place by something very similar to this cone, a sort of a collar. What I have been referring to is a device that the Domestic Company used to use, and I think they use something similar to it now, a knife-edge bearing, a knife-edge on the treadle, that sets in a little socket on the rod. That was held to its place by a sort of collar that was all the while getting loose.

Q. What would occur when they got loose?

A. Noisy, and would be out of alignment. It would make it noisy and hard-running. It had a set-screw to hold it in place. The collar would not be knife-edge; it would be merely a device,
305 a kind of a collar that would hold over the knife-edge, to keep it from getting out of place. The knife-edge was arranged under the collar.

Q. Part of or connected with the collar?

A. Yes, sir; they had all to be together, or they would not work.

Q. In this device which you have in your hand, which consists of a collar mounted on a rod, with a V-shaped groove or bearing for the treadle trunnions to oscillate in, that is also held in position by a set-screw?

A. Yes, sir; and likely to get loose, get out of alignment. It would be the same fault as before, noise, friction, cause of hard running.

Q. In all these machines you have been speaking of, I understand the treadle was mounted on the tie-rod?

A. Yes, sir; the tie-rod that tied the two legs at the bottom of the two legs. All I have reference to were connected with the legs, independent of the brace. That was the general style of machine that was in use at that time.

Q. Did the Singer Company make use of substantially the same style of machine about those years?

A. No; they used a different device. They had the treadle hung in the brace. The brace that holds the legs in proper place. The brace of the sewing-machine stand. They used that, I will say 1888. That I am positive of.

Q. Is that what is known as the Diehl construction; under the patent of a man by the name of Diehl?

A. I am not positive that Diehl patented that; but Diehl is a mechanical expert and gets up a great many patents for them. He is a mechanical expert in their factory. He was at that time
306 at Elizabethport, New Jersey. I was personally acquainted with him. He was a kind of assistant superintendent and mechanical expert; inventor; experimenter.

Q. Have you examined this construction of machine that was gotten up by Mr. Cramer, and is in controversy here, and of which there is a model here marked Plaintiff's Exhibit "G," which is just before you?

A. Yes, sir; I have examined that.

Q. Do you note the manner in which the treadle in the Cramer machine is mounted?

A. Yes, sir; I notice it is hung and mounted in the vertical cross-brace independent of the leg, independent of the rod.

Q. What would be the result, if any, beneficial or otherwise, of hanging that treadle in this vertical brace instead of hanging it on the rod by the cones and set-screws, as has been done before?

A. The brace being all one piece, there is no chance of its getting out of place, and the treadle will always be in alignment; always will be in its proper position and place.

Q. Did that overcome in any way the defect which existed in prior machines, in the manner of hanging the treadle?

A. It overcome very decidedly the defects I spoke of, those cone collars on the rod connecting the two legs.

Q. Look at the construction of sewing-machine stands, with regard to the mounting of the treadle, that is shown in this other model, Plaintiff's Exhibit "P," which represents the con-
307 struction of the sewing machine sold by the Singer Manufacturing Company. Do you understand the way in which that treadle is mounted?

A. Yes, sir. In the first place, this which I have hold of is the brace which connects the two legs, holds them in position, and the treadle is hung in this brace independent of the legs or the rod or the connecting rod; that is, when I say "connecting rod," I mean the rod that connects the two legs. I guess you would call it tie-rod.

Q. This machine, as I understand it, has conical bolts called point-center bearings, which extend through the bottom of the brace and work in a groove-shaped socket in the treadle?

A. Yes, sir. I understand that construction.

Q. State what effect that construction would have in regard to overcoming these old defects which you mention as being inherent in the old style of mountings.

Mr. WHEATON: I object to that line of examination, if your honor please, upon the ground that claim 1 covers a combination of elements. He may show we have omitted either one of those elements and substituted another device, which will operate in substantially the same way, in place of that element; but he cannot substitute an entire new combination for that combination.

The COURT: I overrule the objection.

Exception Fifth.

To which ruling of the court, the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

308 A. Well, from the fact that this treadle is hung here in the brace on bearings, there is no possible chance of its getting out of alignment, from the fact that the brace is constructed of one piece, no joints in it, and if the leg gets one way or another, it would not put the treadle out of line. There are no cones to get loose on a rod; no collars to get loose on a rod, and the greatest advantage is, that it keeps it always in its proper place, in perfect alignment, from the fact of it being hung in one solid piece of metal.

Q. Do you find the treadle is hung or mounted in the vertical brace?

A. I find the treadle is hung in the brace on point centers which form the bearing on the brace for the treadle to hang in.

Q. Turn that model upside down, so that the jury can see it for a moment. As I understand that construction, a point-center bolt, such as the one I hold in my hand now, Exhibit "Q," is inserted through the end of the vertical brace from the outside, so as to point inward towards the treadle, and there it works in a groove or depression in the treadle, and in that way oscillates.

A. This point-center goes through the lower part of this brace, and forms a point-center bearing, working in the socket in the treadle.

Q. Now, suppose, instead of that construction as there shown, that is to say, instead of having the conical bolt go through the end of the brace and fastened there by a screw-thread, and held stationary with the socket or bearing hole in the end of the
309 treadle, they had reversed it and put the bolt from the inside, through the end of the treadle, and had put the socket or hole in the brace, and oscillated the treadle that way?

A. The result would have been the same, just *vice versa;* one and the same thing.

Q. It would have been a mere reversal of the parts of the two bearings?

A. That is all. The bearings would be just the same, only reversed. The same benefits would still inhere in the structure that are in it now.

Q. Please compare the structure of that model, with regard to the mounting of the treadle, with the structure of the Cramer model, with regard to the mounting of his treadle, and show what difference in construction there is, if any, and what difference in result, if you can, or in the mode of operation.

A. The only real difference is, merely the difference in the bearings that are used; but both in this and in the Cramer, the treadle is hung in the brace.

Q. What difference in construction, with regard to the form of the bearings, do you find?

A. This is a point-center bearing, a point center, as already explained here, fitting into a socket in the treadle, and the Cramer treadle works in a trunnion. There is a trunnion in the brace. It is independent of the rod; independent of that tie-rod, and hung in the brace.

Q. You notice a difference in the form of construction of the bearings, that one is a knife-edge, and the other is a point-center bearing, do you?

310 A. Yes, sir; there may be various bearings used. He uses a different bearing from this.

Q. Were point-center bearings and knife-edge bearings both old in the art prior to this?

A. Ever since I have known anything about them, they have been in existence, and long before that.

Q. Could you substitute in the art one for the other, and produce the same result?

A. Yes, sir, the same results with either. It is a matter of taste which one would be used. Some persons might prefer a knife-edge bearing and others might prefer a point-center bearing.

Q. Would the inherent defect which you have stated was in sewing machines prior to the time of the Cramer invention, be overcome equally, whether you use the knife-edge bearing, as shown in the Cramer machine, or the point-center bearing, as shown in the defendant's machine?

A. It would overcome the defect, as it would do away with the lost motion caused from those cones on the tie-rod.

Q. Then, what do you find to be the new idea or feature that Mr. Cramer introduces into the art?

A. The new advantage, the greater advantage, I suppose that would be the new feature, would be to get a perfect alignment, doing away with the possibility of lost motion, do away with constant adjustment, and by the construction it makes it more possible to be lighter running than heretofore.

311 Q. What is the particular construction you refer to by which those results would be produced? What is the change from the old construction?

A. The particular construction is, the treadle being hung in the brace, it is bound to be in the proper position, and it is not possible for it to get out of alignment, which it would in the old way, as already explained.

Q. Prior to June, 1880, had you ever seen, known, or heard of machines in which the treadle was hung in the vertical brace?

A. No, sir, I do not call to mind positively any other way except being on the tie-rod; and I was familiar with machines in existence at that time, all the popular machines. I went to work for the Singer Company in the spring of 1887.

Q. Do you recognize in the model which you have here before you Exhibit "P," a style of the machine which the Singer Company sold at that time?

A. Yes, sir; this is the kind that they used at that time. That is the brace and treadle construction they used at that time. They have continued to sell machines of that style since. They have them on the market now. They sold them in large numbers while I was connected with them. They do a very large business throughout the world everywhere. I believe they sell as many sewing machines as all the other companies put together.

Q. What was the standard machine that was sold by the Singer Company while you were with them, of which they sold the most, so far as the mounting of the treadle was concerned?

A. This particular style of brace and treadle. That is the
312 regular family machine that they used this con—family sewing machine, this is, the large trade, family sewing machines.

Q. I will show you some cones and set-screws, four in number, and ask you if that represents the style of cones and set-screws you have been referring to as being used in the old-style machines?

A. Those are the kind I refer to, a regular cone with a set-screw.

Q. Do you notice some of them are worn unevenly?

A. Yes, sir; some are not even around, worn in different places. As I have already said, in adjusting this, you are likely to get them more round than where they were originally, and for that reason you could not get a proper adjustment and cause friction because of the fact of having been worn where it originally was used.

Q. Do those cones that you hold in your hand represent, in a way, the result which would occur from constant use of them in the treadle of a sewing machine?

A. Yes, sir.

Mr. MILLER: We offer those four cones and set-screws in evidence.

Q. Now, Mr. Brown, please turn this model, Exhibit "P," upside down again, so that we can see it. Do you notice that cross or tie-rod there underneath the treadle?

A. Yes, sir, I notice that piece coming across there. It performs the functions of a tie-rod. It takes the place of a tie-rod.

Q. Suppose you were to cut that piece off entirely, and still leave the treadle hung as it is, would that machine operate the same as before?

313 A. Yes, sir. It might be taken away. It would not make any difference. The treadle would still be mounted in a brace, and would still be held in its proper position.

Cross-examination of A. C. BROWN.

Mr. WHEATON:

Q. Mr. Brown, how many years have you been connected with the sewing-machine business?

A. About twenty-seven years.

Q. You say, point-center bearings were common for carrying the treadle in machines prior to 1880?

A. No, sir; I never saw one. I said that these point centers were an old device. They were not used prior to 1880, to my knowledge, for carrying the treadle in sewing machines. The first time I am positive of them being used was in the year 1888. When the defendant introduced that method of carrying the treadle in the point centers, it was new to the trade, so far as I know.

Q. You have spoken about the Cramer treadle being hung in

the brace. How does he secure, in his patent, the treadle in the brace?

A. He has the treadle hung in the brace on trunnions, and I believe there is a block of wood there to keep it from coming out of place. I know that the treadle is hung in the brace, independent of that tie-rod. As to the methods of bearing it is hung on, there are various methods that it might be hung on. I don't know anything about the patent. All I know about is the mechanical
314 device. I have not examined the patent specifications. I cannot call to mind of ever reading them. I have read a great many patent specifications. I cannot call to mind whether I read those or not.

Q. Have you seen any stand which you know to be made in accordance with the Cramer patent?

A. Yes, sir, I have seen one right here.

Q. If you have never read the patent, how do you know that stand is made in accordance with it?

A. The only thing I know is that the treadle is hung in the brace. That is what I am testifying to, as to the treadle being hung in the brace. That is all I have been asked about.

Q. Are those conical-pointed screws any part of the brace in the Diehl machine?

A. They form a bearing for the treadle, but they do not perform any function as to the brace for the machine for the legs. They form a bearing on the brace for the treadle. They are no part of the brace. They are a bearing on the brace for the treadle to work on. They are in the brace. They are screwed in the brace.

Q. I am speaking of the points themselves, the conical points. Are they in the brace, or merely carried by the brace?

A. They become a part of the brace. They are attached to the brace. They extend out so as to form a bearing for the treadle. They do not strengthen the brace any. They do not assist the brace at all. They are themselves carried by the brace.

Q. And the bearing which carries the treadle is at some little distance inside of the brace, is it not; some little distance from the brace itself?

315 A. No, sir; it is fastened right to the brace, and forms a bearing. It makes an extension there sufficient to make a bearing for the treadle. It does not need to be more than a quarter of an inch, so far as that is concerned. It may be more or less.

Q. How is it in Exhibit "P"?

A. Well, I should say that it extended perhaps three-eighths of an inch or half an inch, an extension on the inside of the brace forming a bearing.

Q. Then that bearing in Exhibit "P" on which the treadle oscillates is from three-eighths of an inch to half an inch away from any part of the brace itself, is it not?

A. No, sir. It is attached to the brace; it is an extension on the brace of three-eighths of an inch or half an inch.

Q. Take the socket in the edge of the treadle itself, where the bearing is located on which the treadle oscillates, or by means of

which the treadle oscillates. Is not that socket from three-eighths of an inch to half an inch away from any part of the brace?

A. In this case it is not more than one-eighth of an inch on each side, the treadle, from the brace proper. But it is not any distance away from the brace, being hung in the brace, because this set-screw forms a part of the brace in this connection, and it is not any distance away from it at all.

Q. Have you not testified several times over that that set-screw was no part of the brace?

A. I testified that that set-screw did not perform any function as a brace, but I say it becomes a part of the brace from this
316 connection—you will note that I say in this connection.

Q. Which will you have it? Is that pointed screw a part of the brace or not?

A. In this connection, it is; it is a part of the brace.

Q. Please look at this stand which is now shown you, and state whether that does not represent the Diehl stand, but with the underneath cross-bar cut out of it?

A. If that is what you call a cross-bar, yes, that shows where it has been cut out.

Mr. MILLER:

Q. In other words, it is a sewing machine without a treadle?

A. Yes, sir.

The stand referred to was here introduced in evidence and marked Defendant's Exhibit 3.

Q. Is not this stand, Defendant's Exhibit 3, a correct representation of the Diehl machine, containing the entire double brace?

A. Well, it is not complete, because the treadle is not there. The brace that is hung to the legs in position is there.

Q. Is not the whole of the vertical double brace in that?

A. No, sir; there is part of it broken away. Here is a part of the brace gone right here. That is a part of the brace as it was originally and as it was constructed. Of course, it forms a brace as it is, but it is not as it originally was; there is a part of it gone.

Q. Is all of the brace there that connects the legs of the two ends of the sewing machine?

A. There is enough of it there, but it is not all there.

Q. Is not the double brace there, with all the connections
317 between it and the legs of the two ends of the sewing machine which are shown in Plaintiff's Exhibit "P"?

A. Not with all the connections; only with the connections of the legs.

Q. That is exactly what the question is. Is there not all the double brace in this Exhibit 3, with all its connections to the legs at the two ends of the sewing machine there?

A. Yes, sir; all the connections are there for the two legs of the sewing machine. That part of the brace is all there.

Q. But, in that there are no means of hanging the treadle, are there?

A. No, sir; not as was originally intended. I don't see any way of hanging the treadle there as it is, unless there was some mechanical device for it. There might be some mechanical device put on that brace as it is there, to hang the treadle in the brace, which it originally was intended to do.

Q. In neither that nor in plaintiff's Exhibit "P" are there any holes through the lower extremities of the double brace which serve as bearings on which any bearing may oscillate, are there?

A. There are no holes there, but there are bearings there at the bottom of the brace for the treadle to work in. There is a point-center bearing attached to the brace for the treadle to work in. And that is all there is on which the treadle is hung.

Q. And those bearings on that point center are at least more than one-sixteenth of an inch away from any part of the brace itself?

318 A. No, sir. I say that they become a part of the brace. They are attached right to the brace. They are not away from the brace at all. In that connection they are a part of the brace, and they form a bearing for the treadle.

Q. Suppose I take Exhibit "P" and take the point centers and treadle out. In that case, is not the entire brace there?

A. As far as bracing the legs is concerned, as far as its functions are concerned as to bracing the machine, it would be all there; but the machine would not be complete, because it was originally intended that the treadle should be hung in the brace there, and the treadle be away from the sewing machine.

Q. You have testified both ways, if I understand you aright, as to that point center being a part of the brace. Now, which way will you have it?

A. I testified to it in this way, if I remember rightly; that in that connection the point center was a part of the brace, but the brace would perform all the functions of a brace without that point center.

Q. After all, is a point center any more than a connection between the brace and the treadle?

A. It forms the bearing; is a part of the brace and forms a bearing for the treadle.

Q. In order to form a bearing, is it not necessary that it shall form a connection between the brace and the treadle?

A. No, sir; I don't say that there is any connection between the point center and the brace in order to form the bearing, be-
319 cause the point center becomes a part of that brace to perform that bearing; a part of it, not any separate part.

Q. Is not that point-center bolt through there a device which connects the brace with the treadle?

A. You could call it a connection. It performs a bearing. I say it is a bearing. It is a device put in there for a bearing.

Q. Is it not a device put in there in order to get a bearing, and is it not necessary to put it there in order to get the bearing?

A. It is what they put it in there for, to get a bearing for that treadle. It is the mechanical bearing for that treadle. Just the

conical point of it is the bearing. The bearing itself is in the edge of the treadle, if it is in the socket.

Q. And there is no bearing for that treadle except the bearing that comes in the socket, in its edges?

A. No, sir.

Q. And that socket is about one-eighth of an inch away from the brace?

A. Yes, sir; it is about one-eighth of an inch away from the brace proper, but it is connected right to the brace with its bearing.

Q. Why do you keep making that remark in your answers, when it is not called for? Have you any interest in this case?

A. No, sir, I have not. I would have been very glad if you had not called me here at all. I have got other things to do.

Q. Why do you keep throwing that remark in all the time?

320 A. Simply it is because what I think to be right. I do not want any misunderstanding of my meaning there.

Q. Do you know how the ends of the treadle in the Cramer machine, Plaintiff's Exhibit "G," would operate if that block and cushion were taken away from them? If they were left without anything to control their end motion or their vertical motion?

A. That block that they have in there does not have anything special to do with the working of it. It would work just about as well without that. But moving it around, it might have a tendency to jump out of place there.

Q. Did you ever operate one of these machines without that block in it?

A. No, sir, I never did.

Q. Did you ever see one operated?

A. No, sir.

Q. In that, there is nothing to hold the treadle from working endwise except the block at the end, is there, or the cushion that comes down between that and the legs?

A. I believe that block holds it in place, but about its working endwise, I don't know about that. It may work endwise, and it may not. It would be in perfect alignment because, as I have said before, it is right there in the brace.

Q. Is there anything in that treadle that would make it work differently because it is Mr. Cramer's, than if it belonged to some one else?

A. No, sir, I don't think there is. I don't see how that would make any difference.

Q. In any other sewing machine where the treadle was just

321 left on its lower bearings, had nothing to keep it from moving endwise and nothing to keep it from rising upwards, it would not operate well at all, would it?

A. Why, no. If it was wobbling all around, it would not operate well.

Q. Is not that the fact with reference to Mr. Cramer's treadle, if you take away the block of wood and cushions that are at its ends?

A. That block of wood at its ends, as I understand it, merely

holds it down. I do not think it holds it endwise. It merely holds it down to its place.

Q. There is a cushion that comes between the ends of the treadle and the legs, that, of course, holds it into its place? You say in the Cramer machine that the double brace or the bearing are independently entirely of the tie-rod?

A. Yes, sir.

Q. How can that be, when the tie-rod is the only thing that holds the brace and the legs together?

A. The brace does not need to be held together. The brace would hold itself together without the tie-rod. The brace being all in one piece, it could not get apart. The tie-rod holds the legs together—holds the legs up against the brace.

Q. And it is the tie-rod that connects the brace and the legs together, is it not?

A. No, sir, not necessarily.

Q. Is it not in that Cramer machine?

A. I believe that the tie-rod holds the legs up against the brace.

A JUROR:

Q. Will you please set that model the other side up, so we can see it?

322 A. Yes, sir. This is the tie-rod. It holds the legs up against the brace there.

Mr. WHEATON:

Q. There is nothing else that holds the legs and brace together at the lower part except the tie-rod, is there?

A. That is all. That is what keeps them all in place.

Q. Are not the screws at the end of the tie-rod just as apt to get loose in Mr. Cramer's machine as they would be in any other machine?

A. I suppose they are, of course.

Q. Suppose that these screws got loose at the end of the tie-rod. Would not that leave the legs to pull apart and away from the brace?

A. The machine would be pretty well racked by the time you got around to that.

Q. Any machine is pretty well racked when it gets out of line, is it not?

A. Yes, sir. That is what I say. By the time that became loose, the whole thing would be out of gear. But it would not make any material difference to the treadle, because the treadle is independent of that.

Q. Would it not incapacitate the machine from doing good work?

A. Why, of course it would unfit it. It would be out of gear all the way through. But that thing is not very likely to occur, because there is no wear on that rod. There is nothing to jar it. There is no treadle working on it, nothing to make it come loose. There is not

much trouble about sewing machines getting loose there anyhow.

323 Q. How is it that you can attach a screw or device in the Cramer machine and it not get out of order, whereas in all other machines it would?

A. I am not speaking about the Cramer in regard to that, but of all machines. I say that nut is not likely to get loose. That is not where the trouble has been.

Q. I will read to you, as you do not seem to understand about the cushions there, what the Cramer patent says in that connection. It says: "Pieces of leather F, or other soft material, cover the top and end of each trunnion, to serve as cushions"—you will notice that says "cover the top and end"?

A. Yes, I understand.

Q. "—to serve as cushions to keep the same close in its bearing"—you understand that, do you?

A. Yes, sir.

Q. "—to prevent the noise which would result were the trunnions permitted to bounce and thump endwise, when the treadle is in motion. The leather F is fitted to the curve of the upper side of the trunnion, which is an arc of a cylinder, whose center of oscillation is the lower edge of the trunnion. The same leather also interposes between the end of the trunnion and the adjacent iron." You understand that?

A. That merely holds it into place, but it has not any wearing upon it particularly.

Q. "*f* is a block serving as a mere backer, to which the cushion F is attached. This block conforms to the back and top side of the cushion, and fills the loop-hole in the brace above the trunnion. It also has tangs or projections *e*, resting in suitable recesses
324 in the brace C, which are held between the brace and the web of the leg E, by which means the block and cushion are held in place." You understand all of that, do you?

A. Yes, sir.

Q. If these screws that hold the tie-rod and legs together get loose, those legs will pull apart, will they not?

A. Yes, sir, they will be quite likely to spread apart a little.

Q. When they get loose and the legs pull apart, then the cushion and the block would be free to come out, would they not? Suppose they were removed. Would it not, as the patent says, bounce and thump? The patent says it is "to prevent the noise which would result were the trunnions permitted to bounce and thump endwise, when the treadle is in motion." If the cushion and block are removed it would leave the treadle free to bounce and thump endwise, as well as to jump vertically, would it not?

A. That is what they are put in there for, to keep it in its proper place. It is possible for it to jump out of its bearings, but in ordinary usage it would not. It would go right along in the same bearing. As a matter of safety, however, they are put in for the purposes specified.

Q. Do you think it would be a practical, operative combination,

if that treadle were left in that way without cushions and without the blocks, and left free to bounce and thump, as the patent mentions?

A. Well, as I remarked a while ago, it is a matter of taste as to what kind of bearing any one would use. It may be that I
325 would not select that kind of bearing at all, if I was making them. That is a trunnion bearing. There may be something different from that used now, something that might be different, better. But the thing that I see about that, as far as the bearing is concerned and as far as the whole construction is concerned, is that the treadle is hung in the brace. That is where I contend all along and always have contended is the great advantage. As to the different bearings that are used, it does not make much difference about that.

Q. Without regard to whether you use a knife-edge bearing or some other bearing there, so long as it has got to be a bearing that is held by that cushion in its place, would it be a practical combination of devices with the ends of the trunnions left free to move endwise and to rise vertically?

A. I don't think those trunnions are left free to move endwise unless they are moved up out of their place; then they can move endwise. They cannot move endwise unless they get up out of their sockets there and are operating out of place.

Q. Suppose this cushion which is interposed between the end of the treadle and the iron of the leg is removed. Then they can move endwise, can they not?

A. The sewing machine would not be complete; it would not be in practical working order. The sewing machine itself, I am speaking of, I am not speaking of the treadle. The treadle is independent of that. The legs might move. With that cushion, as you speak of, brought away from there, it does not necessarily follow that the treadle is going to get out of place.

326 Q. I am speaking of the whole thing together, putting it together without any cushion and without the block in there. There is no such cushion and no such block in the Diehl arrangement, is there?

A. No, sir, but that block forms a part of the construction there, forms a part of the mechanism to hold that in its place. The only merit I saw in the whole thing, as far as my looking at it is concerned, is the treadle being hung in the brace. I care nothing about the bearing. Of course I care about the treadle being hung in the brace. I think that is a fine thing. It has obviated a great many of the objections that there were to treadle construction before.

Q. In the Diehl arrangement there is no block and no cushion, is there?

A. I understand that they are trying to make the Diehl machine the same as the Cramer machine. That is what they claim, I believe. That is what I have tried to prove. I have undertaken to give evidence to substantiate that claim.

Q. As there is no cushion and no block in the Diehl arrange-

ment, I want to know whether this of Mr. Cramer's is a practical, good arrangement, with that block and cushion left out.

A. I think it would work very well with that block and cushion left out, if the machine was sitting still, in regular working order. The bearing is right there, it works right along, and there is nothing to move it around, unless you pick up the machine, and in moving it it falls out, and then I think it would fall back into its place again.

327 Q. Does not any machine wear out in time?

A. Yes, sir, I think it will wear out. But the idea is to get a construction in which you can take up the lost motion, and even after there is lost motion, that it will keep in line and work well. The greatest trouble we have always had with sewing machines is heavy running, and the heavy-running part is usually below the table—the treadle and this construction there. By this arrangement you avoid friction—that is what I contend there, that you avoid friction by having that. You say that I make reference to this all the while, but I can't help it.

Q. Do you avoid friction when you have a cushion bearing on top of that end, oscillating at the upper part of the knife-edge bearing?

A. It holds it into its place, but there is no bearing on that cushion; there is no wear on it. I never saw one running. I never tried one.

Q. In any other kind of machine, if the bearings were left merely to connect at the bottom of the oscillating device, and were left free to move endwise, and free to jump vertically, it would not be a practical device at all?

A. That is not free to move, unless it gets up out of its place; it is not free to move endwise.

Q. The patent says "to prevent the noise which would result, were the trunnions permitted to bounce and thump endwise, when the treadle is in motion." That is the object of the cushion, as stated in the patent.

A. That is what it is, and that is what the object is. I am not trying to get away from that. I say it would work first-rate without the cushion and without the block. I have never used

328 that particular device. I have used that combination on sewing machines—used it right here.

Mr. MILLER:

Q. You mean, in Exhibit "P"?

A. Yes, sir, used it on the Singer sewing machine. That is, the same combination, but not that particular bearing.

Mr. WHEATON:

Q. Have you used a combination with that block and cushion in it?

A. No, sir.

Q. That combination is in the Cramer machine?

A. Yes, sir. What I refer to when I say "combination" is the

treadle hung in the brace. That is the combination—the treadle hung in the brace. I can't get away from that, and I don't want to get away from that. That is the only thing I contend for.

Q. That is the trouble with your testimony. You do not want to get away from it, and you won't get away from it?

A. I cannot. I do not see any chance to get away from it.

Q. When did you leave the Singer Company's employ?

A. I left them in the spring of 1891.

Q. You have some pretty strong feeling against them, have you not?

A. Not particularly. They always treated me first-rate. I guess they have got more feeling against me than I have against them.

Q. Did they not bring suit against you?

A. Yes, sir, for my expenses out here. They gave me the money to come out here, and then sued me for it. But I never paid it, and I got judgment against them for the costs.

329 Q. You never liked them since, have you?

A. Yes, sir. I would like first rate to work for them today, if I could get a good position with them, but they would not have me.

Redirect examination of A. C. BROWN.

Mr. MILLER:

Q. When was it you came out here when they gave you your expenses?

A. It was April of 1890.

Q. You say they sued you to recover back the money?

A. Yes, sir. I think, in justice to myself, I will have to tell you why they sued me. It was simply because I was subpœnaed as a witness on a case similar to this. It was a matter of vindictiveness in their suing me after that suit was tried. That was the Brill case—Brill *vs.* Singer Sewing Machine Company. That was a case brought in this court, in which Brill got a judgment against them for a large sum of money for infringing another patent.

Recross-examination of A. C. BROWN.

Mr. WHEATON:

Q. You were in the Signer Company's employ when you gave your testimony?

A. No, sir. I had left them. I was working for another company at that time.

Q. Did you leave their employ voluntarily, or did the Singer Company discharge you?

A. I don't know that you could call it either one. I finished up the place where I was, and there was another position offered me that I declined; so that you could not exactly call it a discharge or a resignation.

330 Q. Your being a witness in that case was not their reason for discharging you?

A. No, sir, but I tell you it was a big reason why I could never get a position with them again. I had left their employ, and I have never been in their employ since giving that testimony. The suit they brought against me was brought against me after the testimony was given in the Brill case.

Afternoon session.

HERMAN CRAMER, JR., called for the plaintiff, was sworn and testified as follows:

Mr. MILLER:

Q. Mr. Cramer, I believe you are the son of Herman Cramer, the plaintiff?

A. Yes, sir.

Q. Where is your home?

A. Well, my business address is here in the city, in the Mills building. I am in the life-insurance business.

Q. Were you ever connected in any way with the sewing machines of your father?

A. I was. I started to work for my father in the shop when I was quite a boy, I should judge nine or ten or eleven years of age. His shop was located in Sonora, Tuolumne county, and attended to work pertaining to the sewing-machine business, so far as the construction and putting up of sewing machines was concerned. He sold them through Tuolumne, a portion of Calaveras, a portion of Mariposa county, and a portion of Stanislaus county, and also in San Joaquin county.

Q. What was it you had to do, if anything, in regard to these sewing machines?

331 A. I assisted father, as best as I could as a boy and growing up, by working before I went to school and in the afternoons and evenings. I became familiar with the sewing machines. My father was selling the American. That was the machine he was handling more than any other.

Q. How were the treadles mounted?

A. On a rod, commonly called a tie-rod, at the bottom of the legs.

Q. How was it arranged to oscillate?

A. With two cones on either end of the treadle, set in a socket in each end or side of the treadle, and they were set or fastened to the tie-rod by set-screws—these cones were. These cones were collars that fitted over the rod so as to jamb up against the ends of the treadle in a socket.

Q. What difficulty was experienced in that kind of construction?

A. I noticed a great deal of trouble in that regard because people complained about the sewing-machine treadle being out of order and making a noise; the motion unsteady, and sometimes it would affect the work done by the sewing machine head on the top of the stand, and it kept me busy adjusting the treadle from time to time. We would have to loosen the screws, set the cones up against the side of the treadle properly and snug, and tighten them up.

Q. After you had done that, would they wear again?

A. Yes, sir, we would do the same thing—tighten them up. Adjusting them constantly. They would wear uneven.

332 Q. Did you have any experience with these machines that your father got up, or rather, this treadle arrangement that your father got up?

A. Yes, sir, I sold some. Most I sold in Tuolumne county. I know I sold one or two in Stanislaus county, and I think I sold several in Mariposa county. I went round in a wagon and sold machines in that way.

Q. What was the feature in this machine of your father's that was different from what he had been selling before, so far as the treadle was concerned and its mountings?

A. It simply did away with any more trouble as regards the adjusting of the sewing-machine treadle, because it was always all right; in perfect order. That was my experience.

Q. What satisfaction did the arrangement give to the people who bought them?

A. Good satisfaction, as far as I know. I never heard of any complaints from them.

Q. Did your father build the machines entire?

A. No, sir, they were bought in Philadelphia from the factory of the American Sewing Machine Co. He took out the treadle and put his treadle into them. I have seen these machines of my father operate, and have used them myself considerably.

Q. Did you acquire considerable expertness in regard to the matter, from your experience with them?

A. Once upon a time I considered I knew considerable about a sewing machine. It has been a good many years since I have had anything to do with the sewing-machine business.

333 Q. In your father's construction there is a wooden black and leather cushion put in the brace over the bearing. Did you ever operate the machines without that?

A. Yes, sir.

Q. How did they operate?

A. Just as well. They are not needed in there, so far as I can see, as regards the operation of the treadle.

Q. The treadle could still be kept in line without them?

A. They could not get out of line, when the treadle is in motion, being operated as it should be by the foot. You could take it in your hand and shuffle it around. I have operated them without that block and cushion, set some of them up myself and left the block out. I do not mean to say I sold any with the block out. I say I set some up in the shop, more for the experiment than anything else.

Q. You found out they could be operated successfully without the block?

A. Unquestionably.

Q. In what year did you sell these machines for your father; about what time?

A. In 1884 or 1885. I am not positive. I left school and went

out in the field in charge of my father's business, on the outside work.

Q. What was the nature and extent of his business that he built up in regard to sewing machines?

A. He was doing a nice business; selling quite a number of sewing machines; just how many I don't know. When I took the business up, I used to sell all the way from ten to fifteen a month for quite a while; that was for several months.

334 Q. Did he get any additional price for the treadle he put on?

A. Yes, sir, I always asked $5 more for the treadle. Those were his instructions. I always got $5 with that patent treadle on.

Q. Was that on account of having the patent treadle on?

A. Yes, sir, that was the only reason, and the only change in the sewing machines he was selling. They had the patent treadle on, and the others had not.

Q. Did you notice what kind of machines the Singer Company sold in that section of the country, along in 1884, 1885 and 1886?

A. Do you mean as regards the treadle used on the machines they were selling?

Q. Yes.

A. They were selling a machine with a treadle that I believe was called the Diehl treadle.

Q. Did you see the machines, or any of them, that the Singer Company was selling in that territory?

A. Yes, sir.

Q. Look at that model, Exhibit "P," and see whether the treadle in those machines were mounted in substantially that way.

A. Yes, sir, just about that time this treadle came into use, and was used on the sewing machines that the Singer Company were selling in the territory in which we were doing business.

Q. Did that style come into vogue in that territory after your father put his on the market?

335 A. Yes, sir, my father had his treadle, and I presume sold some before I took charge of his wagon and took his place.

Q. After the Singer Company put the machines of the style you refer to on the market, were they sold in considerable numbers?

A. Did they sell any in the territory in which we were operating? They did. Our trade gradually dropped off.

Q. State what effect it had on the sale of your father's machines *continuing* the patent treadle.

A. They were charging no more for these sewing machines that they put on the market, containing this treadle, or a treadle similar to this, than they did when they used the old treadle, and we were charging $5 more for sewing machines containing father's patent treadle. The result was that I could not sell any. The business dropped off, and I finally had to quit entirely.

Q. As long as the Singer Company was selling theirs at the same old price, you were not able to sell yours at the additional price of $5?

A. No, sir, we could not. That was the point they made against us. It was well sustained, and I could not sell any sewing machines,

because they were introducing a treadle which they claimed was the same treadle.

Q. They claimed it was the same treadle?

A. Yes, sir. They sold it in that same way, at the same old price, and we were unable to sell ours at the advanced price of $5.

Q. You had to sell the old machines that you sold before?

A. Yes, sir. I sold the new machines as fast as I got them.

336 Father was making arrangements to have them manufactured. They were costing him considerable money. About that time these other treadles came in. That is just about the way that I gradually drifted out of the busin . I considered I was forced out of it. I went into the life-insurance business, and have been in it ever since

Q. The sewing-machine business in that line up there dropped out of existence in that way?

A. So far as I was concerned, and my father.

Q. Referring to your father's machines, what was the advantage which was obtained in the operation of a machine of that construction over the old construction, which made the machines satisfactory?

A. Perfect alignment in a treadle that works into a casting of one piece.

Q. Which casting do you refer to of one piece?

A. The double vertical cross-brace. The treadle was mounted in that. It produced perfect alignment, and there was no possible way of getting it out of order.

Q. How was the treadle mounted in the Singer Company's machine that was sold there, of the Diehl type?

A. It was mounted in a double vertical brace.

Q. Would that style of mounting contain the advantage you referred to a moment ago, of keeping it in alignment?

A. It would.

337 Cross-examination of H. CRAMER, JR.

Mr. WHEATON:

Q. Did you ever learn any mechanical trade?

A. I consider I did, yes. The trade of a sewing-machine man. I was brought up in the shop with my father. I consider my father a No. 1 mechanic in the sewing-machine line. I consider him a first-rate mechanic.

Q. At what date, if you know, did your father sell the last machine that had his treadle in it?

A. I don't know.

Q. When did he first put his treadle into the American sewing machine?

A. I could not give you the exact date. That is going back when I was about fourteen years of age. I could not be positive as to the exact year. But I know it was prior to 1884. It may have been in 1880 or 1881. That is bringing it back to the time when I was quite a young boy, therefore I cannot be positive as to the date.

Q. Do you know the date when you first saw one of these Diehl treadles?

A. No, sir, only as I stated, in either 1884 or 1885. I fix the year by the fact that I know I was in Oakdale in 1884, and sold near Oakdale one of those machines. I am positive in 1884 it was one of the American sewing machines with our patent treadle.

Q. Perhaps you did not understand what I meant by the Diehl treadle. By the Diehl treadle I mean such a treadle as is in Exhibit "P." Do you know the year that you first saw one of them?

338 A. It must have been, I will say, in 1885.

Q. By what do you fix that date?

A. Because it was after I had sold this sewing machine in Stanislaus county. This was in the fall of the year, and I know it was in 1884. That is as near as I can get at it.

Q. How long after the Singer Company were selling their machines as you testified, did your father continue to sell sewing machines?

A. I presume father is selling sewing machines now, although I do not know whether he has sold a half a dozen in the last ten years. He is still in business. There are sewing machines up there on sale in Sonora.

Q. He continued in the business right along; he has been continuing in the business ever since?

A. In a way, yes. He has his place of business there. I do not think he is selling any sewing machines. I don't know. I cannot say. He may have sold a few in the last few years.

Q. Up to 1890 from 1885, did he continue in the business of selling, or trying to sell, the American sewing machines?

A. He certainly did.

Q. Did he not sell at least nine-tenths of those American sewing machines after 1885 without his treadle in them?

A. I don't know that I can answer that question exactly. I will say, most of the sewing machines that he sold, or I sold for him, from 1885 to 1890, did not contain his patent treadle on, because he did not have them, and we had a large stock of other sewing

339 machines. I don't know as to nine-tenths. I don't know how many were sold.

Q. Did your father have a lot of castings made for his treadle?

A. As they were made, they were used. At the Sonora foundry, they did not cast more than once a week, or once a month, or once in two weeks, and often we would only get one treadle at a casting.

Q. Did your father put all of the castings on to treadles, and sell them; all the castings that he obtained, I should say, or did he have some of those castings left on hand afterwards?

A. As far as I know, when I went out with the wagon I would ask him if there was not any of those patent treadles in the shop. I would ask him if he did not have any with the patent treadle on. I wanted at least one. I used to carry two sewing machines at a time, and some of them would have the patent treadle on. Whether he used them all or not, I could not say. To the best of my knowledge and belief, that is all I can say, that he used them as fast as they were cast.

Q. Did he have any of those castings left on hand after he quit trying to sell his treadle?

A. I don't know that he has quit trying to sell it as yet. I don't know whether he has or not.

Q. Do you know whether he quit trying to sell his treadle in 1885, or between that and 1890?

A. He did not sell many of them, because we would not sell them. The other sewing machines, the Singer sewing-machine people run us out of that country. That is the size of it. That was my
340 experience in the field, with his sewing-machine treadle. I presume he has tried to sell them since. I don't know.

Q. Why did he not put his treadle into the American machines that you were selling in 1885 and after that, instead of selling the American machines with the regular American treadle in?

A. When any were on hand, they were put in the sewing machines. That was my understanding. I never saw any around there, but I put them in the sewing machines myself if father was not there, and I wanted them. There were not many on hand, and we often wanted them and could not get them.

Q. Do you mean to say that you had any trouble in getting the castings for those treadles?

A. Me myself? I had nothing to do with making the castings, or ordering them. My father was doing all that. I was simply selling the sewing machines for my father. I was never engaged in the sewing-machine business for myself, or my own interest, but simply as an employee of my father.

Q. Do you know why your father did not put his treadle in all of those American sewing machines, instead of selling them with the regular American sewing-machine treadle in them?

A. Because he did not have the treadles on hand; because he said they were costing him a good deal of money to cast, and he was negotiating to try and get them cast by a factory in large quantities, where he could have them cast at a lower figure. At the same time, there was a treadle brought into the market that they
341 were selling for the same price as we sold our machines before, and my father was then exacting $5 more for our machine.

Q. It was just as much an advantage to you to have your father's treadle after 1885 as it was before?

A. I don't see what difference it could make as to the date.

Q. If it was worth while for the purchaser of the American sewing machine to pay $5 extra to have your father's treadle in, it was just as much an object to do that after 1885 as it was before?

A. Yes, sir; and they called for them, too. I supplied them as fast as I could.

Q. If your father testified that from 1880 to 1885 he only sold between thirty-five and forty machines with his treadle in, you would believe what he said, wouldn't you?

A. Yes, sir; I make no statement to the contrary. I don't know how many he sold or manufactured.

Q. You say the people kept calling for them after 1885?

A. As long as I was in the business they would ask for the sewing machine with father's patent treadle on. I supplied them as long as we had them to supply them.

Q. You sold the American machines in large quantities without them, nine or ten per month, on an average?

A. Nine or ten a month? Yes, somewhere thereabouts. The business dropped off. In the last three years we did not sell nine or ten a month.

342 Q. You say that the people kept calling for them, and you individually could not supply them. Was not your father at that time able to supply the entire market with his treadles, no matter how many had been called for?

A. I presume so. I know he was negotiating, or writing letters, at least, I presume negotiating, with eastern manufacturers to have them cast in large quantities. I sold many a sewing machine with the promise that, when the treadles were plentiful and father got them out, that we would replace them for an extra $5.

Q. The Diehl treadle, that is, the Singer Sewing Machine Company's, was never put into the American machines, to your knowledge, was it?

A. Do you mean to say, was an American sewing-machine head ever used on a Diehl treadle, to my knowledge?

A. I ask you if the Diehl treadles, such as are in Exhibit "P," were ever put into the American sewing machines, to your knowledge?

A. No, sir, I never saw that. Do you mean put on the market in that way?

Q. In selling the American machine, your father used to take out the treadle that belonged to it, and put in place of that his own treadle, did he not?

A. Yes, sir.

Q. You say that the sale of the Diehl treadle was what stopped your father from continuing to do that; was that correct?

A. Yes.

Q. Was the Diehl treadle ever put by the Singer Sewing Machine Company into the American machines?

A. Not to my knowledge.

Q. Was the Diehl treadle ever sold separate from the Singer machines, to your knowledge?

343 A. No, sir, not to my knowledge.

Q. Did you ever know of the Diehl treadle and brace being put into the stand of the American sewing machine?

A. Father has a treadle—I don't know, but my opinion is it is the Diehl treadle. That has been put in the stand with the American sewing machine, yes.

Q. Did your father ever have any of the Diehl treadles to sell?

A. No, sir, I don't think he bought any treadles from Mr. Diehl to sell. He made a treadle, which he had patented. That is the treadle I was referring to, the treadle that father had patented.

Q. Do you call that the Diehl treadle?

A. I do, because it works in connection with the brace. That is

the reason. I can only see a difference in the bearings. Diehl used point centers, and father knife-edge.

Q. Did you ever know one of those Diehl treadles, either with or without the Diehl brace, to be put into any of the sewing-machine stands which your father was selling?

A. No, sir.

Q. Then how in the world did that Diehl treadle drive your father's patented treadle out of the market?

A. Because it accomplished the same results; exactly the same results. That is the reason.

Q. Your father's treadle drove the head mechanism of an American sewing machine, did it not?

A. Correct.

Q. Did you ever know one of those Diehl treadles to
344 drive the head mechanism of an American sewing machine?

A. I never have.

Q. Then that treadle never took the place of your father's treadle, did it?

A. The treadle is one thing, and the sewing machine another. There is no difference in some of the heads. The question is, getting the motive power underneath. That is the difficulty.

Q. Is it not a fact that the Singer Sewing Machine Co. has sold probably three times as many sewing machines as all of the other sewing machines put together for, say, the last twenty-five years?

A. From what I heard, I should presume that that was a fact, but I don't know it.

Q. That was the fact, was it not, long before the Diehl treadle was introduced into the Singer machine?

A. Yes, sir, or any other similar treadle. They all had the same old style and way of mounting the treadle, practically the same.

Q. There were some qualities, facts or conditions, that made the Singer sewing machine called for by the market in much larger quantities than any other sewing machine?

A. I do not say that. The Singer sewing machine, as I understand it, is a richer corporation than any other institution of the kind, and I presume they employ more men. It just depends how hard a business is pressed, as to the extent of the success of the business. There may be other sewing machines quite as good that amounted to very little, so far as the success is concerned, because they have not pressed them on the market. It is a fact that,
345 in my opinion, that they have at least three times as many agents, and possibly more, than any other sewing machine company doing business in the State. I have traveled all over the State, and meet them quite frequently, more so than any other.

Q. Have you any reason to doubt but that it was the merits, or the pushing by its agents of the Singer sewing machine that reduced your father's trade in the way you mention?

A. I am positive that it was not. I think my father was selling the best machine. I believe father was selling the best machine when he put his new treadle on. He had the proposition about as complete as I thought it need be. We felt satisfied. The Singer

Company came in with a treadle, and claimed that they had the Cramer treadle. That claim was made by their agents through the territory, that they had the Cramer treadle.

Q. Name one of the agents that can be produced today, whoever made such a claim as that.

A. I don't know. It is a matter of hearsay. This is what I got when I was traveling through the country, soliciting the sale of sewing machines. It was purely hearsay. I did not deny but what they had the same treadle as we had. They had all the undergearing fixed as nice as we had. The people said, "Why shall we pay you $5 more than we do them? We will not do it."

Mr. MILLER:

Q. The Singer Company was selling machines for $5 less than you?

A. We advanced the price $5. They sold their sewing machines at the regular price.

Mr. WHEATON:

346 Q. When these other sewing machines came in the market in competition with the American, you were not able to get people to purchase the American sewing machines with the Cramer treadle, and pay an advance of $5 for them?

A. No, sir, not after the Diehl treadle came on the market. We could not induce them to pay $5 more for the Cramer treadle.

Q. Yet you did continue to sell that same American sewing machine, with its regular brace and treadle in it?

A. Yes, sir, but in smaller quantities, until I had to quit it altogether.

Redirect examination of H. CRAMER, JR.

Mr. MILLER:

Q. What year were you born in?

A. August 16, 1867.

Recross-examination of H. CRAMER, JR.

Mr. WHEATON:

Q. When you were selling the American machine, with the regular American brace and treadle in it, were not the bearings of the treadle always in perfect alignment when you delivered the machine to your customers?

A. No, sir, it was impossible.

Q. At what price were you selling the American machine?

A. That depended upon the style of machine. To give you now the exact price, I don't know that I could do it. A sewing machine that sold for $70, the regular price, the Singer Company was selling it for $70, and we were selling it for $70. If we put a treadle on a sewing machine that we sold for $65, we simply asked $5 more for the treadle.

347 Q. What commission did the agents get in selling those machines?

A. I don't know. I worked for my father, and for a long while received nothing more than my board and clothes. I did not get any more, or expect any more. I think he bought them. I don't think he sold machines on commission. If he did, I never knew it.

JOSEPH E. LAWLER, called for the plaintiff, was sworn and testified as follows:

Mr. MILLER:

Q. What is your business?

A. I am in the sewing-machine business, from 1875 up to the present time. Until the 14th of last October I was connected with the Singer Company. I was traveling through fourteen counties in the State of California. I was ranked as salesman and collector, sewing-machine agent.

Q. Did you become familiar with the different styles of machines that the Singer Company was carrying, and which you were selling?

A. Yes, sir.

Q. Did you note and understand the method in which they mounted their treadle in their machines?

A. Yes, sir.

Q. Do you know of a machine sold by them referred to as the Diehl machine?

A. I never heard of the Diehl machine by that name.

Q. What name did you hear of it by?

A. Nothing, only the treadle, the improved treadle. I never heard it mentioned by any particular name.

Q. It was called the improved treadle?

348 A. The treadle and brace.

Q. I will show you a catalogue of the Singer Sewing Machine Company, showing a sewing-machine stand with a treadle on it, entitled "The Improved Family machine," and ask you if you sold machines of that kind?

A. Yes, sir. That was called "The Improved Family." I sold a great many of those.

Q. I will show you this model, Exhibit "P," and call your attention to the way in which the treadle is mounted there, and ask you if that is substantially the same style as this "Improved Family" down in the catalogue?

A. Yes, sir, that is the same. That is the kind of machine I sold for them.

Q. When did you commence to sell machines of that kind for them?

A. I cannot exactly say when the new machines came out. I think about 1885, or 1886, or 1887. I am not positive when this treadle came out.

Q. Prior to the time that they introduced this improved treadle,

which you have been referring to, how were treadles of sewing machines generally mounted?

A. The one before this one came out on what we call the Oscillator machine, the first that came out upon this coast that I seen. It had a treadle with center points not hung in the brace like this, but center points in the stand, mounted in the legs.

Q. Let us go back to the time when you began in 1874. How was the treadle mounted then in the first one?

A. With cones on a rod, running across from one stand to
349 another, the tie-rod that held the legs together. The treadle was mounted on that tie-rod. The cones were held in place by a kind of screw that held the treadle in its place from moving backward and forward.

Q. Look at one of those models at the side of you, and see if you recognize those as the kind of cones and set-screws that were used?

A. Yes, sir.

Q. And here are some cones and set-screws marked Exhibit "U." See if those are the kind you refer to.

A. Yes, sir. Those are the style of cones and set-screws used in the early days.

Q. In selling those machines, what, if any, difficulty was encountered?

A. These cones got loose all the time. The treadle was wearing on this rod, consequently it would get loose, and therefore our difficulty was, we would be called on to tighten those. The treadle was always moving up and down, making a good deal of noise.

Q. When they got out of order, what would you do?

A. Unscrew those; brace them in again against the treadle, so as to hold it tight. As fast as they became loose that way, we would have to readjust them. When they got loose and wore that way, they caused a rattling noise.

Q. How did they affect the sewing operation itself when they were loose?

A. It had not the steady motion that the new treadle has. It has a kind of a jerky motion. To give you an instance: One day I was, I think, in Santa Rosa, and trying to sell a sewing machine to a doctor's sister. I was talking the merits of the Singer sewing machine, when the doctor came in. He told his sister not to
350 have anything to do with the machine, because it was not steady. She was not a very healthy lady—delicate. I told her of the steady ease of the new Singer, and he put his foot on the improved treadle, and he found it was a very easy, soft motion, and he told her she might buy it.

Q. Was that one of the patent treadles?

A. The new patent treadle. If it had been this treadle, I don't believe he would have let her taken it.

Q. In this device which you have just been describing, where the treadle was held in place by cones and set-screws, I understand that that was mounted on a rod which held the two legs together?

A. Yes, sir.

Q. Connected in any way with the vertical brace?

A. No, sir.

Q. What was the next form of treadle mounting that the Singer Company adopted after they stopped the use of cones and set-screws?

A. They adopted the treadle where the set-screw was on both ends, with the treadle all in one piece, mounted with set-screws which connected both legs together. The two ends were attached to the legs. Instead of having the treadle mounted on the rod, it was all in one piece, but it went from one stand to the other. The treadle oscillated on those center points. They were conical screws like these. They extended into a socket in the leg, so that the change they made from the old one was to mount these treadles with point screws in the legs. They used that style of mounting probably three or four years. It gave still that short, jerky motion. It had not the easy, soft motion of the other treadle.

Q. What was the next treadle that they adopted?

351 A. The center brace, this vertical cross-brace. They mounted the treadle in that brace. That was a great improvement.

Q. How long did they continue to sell that style?

A. I don't know. I think I was selling it from 1889, or 1888. They have not changed from that style of mounting up to the present time.

Q. They had three styles of mounting: First, in 1874, they mounted the treadle on the rod that connected the legs together. That they found objectionable. Afterwards they mounted the treadle in the two legs of the machine, which also was found objectionable. Afterwards they mounted the treadle in the vertical brace, and have kept it there ever since?

A. Yes, sir. That was the development from one to the other.

Q. The last one they got, that they called the improved treadle, is the one they have kept ever since?

A. Yes, sir. They still have it on the market today. That gives good satisfaction.

Q. Can you give me about the number of these machines with that style of treadle mounting that you sold for the Singer Company?

A. Probably a thousand or more.

Q. Do you know anything in regard to the extent of the sales made in California by the Singer Manufacturing Company of machines containing this improved treadle?

A. Oh, they are enormous, the amount of sales.

Q. Did the Singer Company advertise as to the number of machines they have sold?

352 A. Yes, sir. They are in the sixteen millions now, I believe. It was three millions, I think, when I went in, in 1874.

Cross-examination of JOSEPH E. LAWLER.

Mr. WHEATON:

Q. Where have you seen any advertisements of the Singer Company that they have sold sixteen millions?

A. In all their books nearly. I posted them up myself. We had circulars going around that we put on the fences. That was the entire sales of the Singer Company machines, from the time the company started business, and included the sales made in the East as well as the sales made here, and all through Europe.

Q. Were you discharged from the Singer Company last October?

A. I was not discharged. I was laid off. They reorganized the company and told me to take a rest. That is all. I suppose it was as good as a discharge.

Q. I understand you to say that the tie-rods in the old construction of treadles had no connection with the brace. Is that so?

A. They had nothing to do with the brace.

Q. Is it not a fact that the braces in all machines are carried by the webs or legs at the two ends of the sewing machine?

A. Yes, sir, but they are independent of the treadle. The brace has nothing to do with the bar at all.

Q. We will come to that. Those braces, in all machines, old as well as new, were always bolted solid to the legs of the machine, were they not?

353 A. Exactly, sir.

Q. Bolted so they were perfectly tight and fast with the machine, having no play at all in the joint between the brace and the legs?

A. Kept the legs together, braced the legs, yes, and what they called the stand.

Q. Connected them together by a bolt and nuts, in which they were screwed so that they were perfectly tight together and immovable?

A. The stand was braced, yes. That was the only thing they had, was the brace, that held the legs together.

Q. And the only thing there was to carry the brace was the legs, was it not?

A. That was the only thing that held them together—one sup--orted the other.

Q. They were fastened solidly together so there was no movement between them, were they not?

A. Not in the stand or legs, no, sir.

Q. Besides that brace connection, here would be the cover which would be bolted in several places, which would prevent any warping or side movements of the legs with reference to each other, would it not?

A. That is right, sir.

Q. That is, the table would prevent the legs from spreading on one side or the other?

A. That is right.

Q. And it took that table above, and the connections of the brace with the legs, to keep the legs steady?

A. No, sir. The legs were steady with the brace. That
354 was all right. The table also strengthened the connection on top.

Q. So that the table and the brace and the legs were fastened together just as much as if they all had *all* been cast in one piece, were they not?

A. They were all screwed together; sometimes the screws would work loose. Many a time I have found it necessary to tighten them.

Q. That being so, how is it that the brace would hold the treadle any more steadily than the legs would hold it?

A. The treadle on this rod has cone screws, and with the side working of the treadle in its oscillating, that naturally wears it—it sets on this rod, and it naturally wears on it. And after you have it some time, it forces those loose, and then you have, as soon as they get loose, to tighten them up again on each side, to keep the treadle in its place.

Q. Any machine is always liable to wear and get out of order, is it not?

A. Certainly.

Q. In these cones, there is very little play between them and the rods they pass over?

A. Oh, yes, there is great play, I think. Enough so that the treadle could jump. You will see plenty of them now in town that are already in use, and they are the same way. It cannot very well jump afterwards, because the pitman holds it. I mean a short jerk, and does not give the easy motion. For instance, when it is new, and you put your foot on it, it is an easy motion, but as soon as it gets loose and worn, it makes a short jerky motion. It will
355 move as far as the pitman will allow it to go. The action of the treadle will pull down the pitman. And that, in reacting, will make the treadle jump up. It gives the short jerk; what we call a jerky motion. When these collars get loose, there is nothing below to keep the treadle from jumping until the bottom of the collar reaches the rod. It interferes with the running of the machine. As I said before, it gives a fearful noise, and it gives a short, jerky motion. For instance, a delicate woman cannot run it; she would not be allowed to; her physician would not allow her to run her machine if it was in that state.

Q. Do you believe that a treadle would be secured in a machine so as to make it a practical, good working machine, if the treadle was left entirely free to jump just as high as the pitman rod was a mind to pull it?

A. I don't think it would.

Q. Do you understand this Cramer patent?

A. I don't know what the Cramer patent is. I don't know about any of the patents, but only about the machines that I see.

Q. But if that is a construction in which the treadle is left free

to jump as high as the pitman would pull it, you would not believe it was a practical treadle, would you?

A. Oh, no, not nowadays, I would not think it was a practical treadle.

Q. When the point centers in the second construction that you speak of were placed through the legs of the machine, and the legs were bolted tight to the brace, so that it could not move unless the brace moved, why would not those point centers operate the
356 same in that way as they would if they had been put through the brace itself?

A. They do operate all right, but not as good as the last treadle. We had no fault to find with that until we saw the other ones—saw the better one.

Q. What they call the Diehl treadle, such as is shown in Exhibit "P" there, is an improvement over all the treadles, is it not? That is the brace and treadle and band wheel all being together—all in the brace.

A. Yes, sir.

Redirect examination of JOSEPH E. LAWLER.

Mr. MILLER:

Q. You were asked whether you were discharged by the Singer Manufacturing Company. When was it that you left their employ?

A. On the 14th of October last. They had a general overhauling in the office at that time. The head manager and the city manager, and all the branch managers through the State of California were let out. The general manager then was Mr. Fry. They let out all of the subordinate employees in San Francisco, that were drawing salary. They divided it up and put it into the hands of what they called district agents. I was let out along with the other employees, at the same time. I was about the last, I believe. No reason was given us why we were discharged. The gentleman who relieved me said that probably I would prefer the country to the city.

357 C. A. CHANDLER, recalled for the plaintiff.

Mr. MILLER:

Q. Have you looked up the matter of these reports, concerning the sales of these machines?

A. Yes, sir.

Q. Did you find any such reports?

A. Yes, sir. We have the reports from the branches here in the room. I have produced the boxes containing them all, as you have requested.

Q. I want the San Francisco branch for January 1896, the first one.

A. Very well, I will get it.

The COURT: This will be an interminable investigation if the method to be pursued is to be to go through all these reports.

Mr. MILLER: They can save us all that trouble by simply telling us how many machines they sold during those years. If they cannot tell exactly, I am willing to let them guess at it. There is no danger of their guessing too high.

Mr. OFFIELD: As I understand it, your honor, it will be just as interminable for us as it is for them.

The COURT: Could you give a reasonable guess at the number? Mr. Miller will take a guess, he says.

Mr. OFFIELD: If he will take a guess, these gentlemen could work at it over night, and perhaps they could make a guess. As I understand it, your honor, these reports simply show the machines under the names indicating the heads of the machines. They do not all of them go upon this kind of a stand. So it will be merely a guess, in any event.

Mr. MILLER:

358 Q. Mr. Chandler do you not keep a book called "An abstract of sales," which shows the sales of the different styles of machines?

A. Why, yes, they are right there. Those books on that table give you all the information that is in the reports.

The COURT: You have already indicated that you would take an estimate. It seems to me that that might possibly be a way of disposing of this question. If you are willing to take an estimate, I understand that Mr. Chandler, or somebody connected with the company, will go through the two years prior to October 24, 1896, and ascertain the number of machines that were sold under the head of "Improved Family" and "Vibrating Shuttle," and the "Automatic Chain Stitch." Those three heads seem to have been put on this particular vertical cross-brace during that time. Will that be satisfactory, Mr. Miller?

Mr. MILLER: Yes, that will be satisfactory, your honor.

The COURT: What conclusion have you arrived at, if any?

Mr. MILLER: The gentlemen say they will figure it out the best way they can, and I tell them that if they will take one month and figure out that one month, we will take that as an estimate and approximate it from that. Then suppose you make two estimates, one for the first six months and one for the last six.

The COURT: That will do. October, 1895, and June, 1896. Will that do Mr. Miller?

359 The COURT:

Q. Mr. Chandler, will you be ready tomorrow morning with some information?

A. Yes, sir.

THURSDAY, *April* 5, 1900.

Direct examination of C. A. CHANDLER resumed.

Mr. MILLER:

Q. Mr. Chandler, will you produce the memorandum now we were discussing at the time of the adjournment yesterday regarding sales of machines?

A. Yes, sir.

Q. What did you do in that matter?

A. I took the journal from here yesterday afternoon to the office, and gave our chief book-keeper instructions to get the figures for those months, October, 1895, and June, 1896. I should like to state that I find those are two of the very best months we have usually in the year. January and October would be a more fair average; but June and October are generally the best months we have.

Q. This first memorandum, October, 1895, shows these figures: "Gross, 98; repossessions, 22; net, 76," and underneath that is another line: "Gross, 153; repossessions, 23; net, 130." Then there is the total: "Gross, 251; repossessions, 45; net, 206." What do those figures indicate?

A. That the 206 represent the net sales in that district during that month.

Q. What became of these repossessions? They came back into the company's possession?

A. They go back into stock, and we sell those over again.

360 That comes from the fact that the machines are leased, and some one makes default, and we have to take back the machine. We call those repossessions.

Q. In regard to this other memorandum: In this other column, for June, 1896, you have the totals figured up: "Gross sales, 203; repossessions, 28; net, 180." I presume the same testimony would apply to that, as to the method of procedure, as to the others?

A. Just the same.

Q. Which did you say were the best months of the year?

A. Those two months you have there are usually the best months we have, that would be October and June. I took off a statement of January, 1895, which I have in my hand here, it runs: "Total sales, 173; repossessions, 39; net sales, 134." These were made by our book-keeper. I have no reason for doubting their accuracy. His name is H. J. Blanchet.

(The memoranda referred to were here introduced in evidence and marked Plaintiff's Exhibits "V" and "W," the following being copies thereof:)

PLAINTIFF'S EXHIBIT "V."

Jan'y, 1895.

Gross.	Rep.	Net.
56	19	37
69	7	62
48	13	35
173	39	134

361 PLAINTIFF'S EXHIBIT "W."

Oct., '95.

Gross.	Rep.	Net.
98	22	76
153	23	130
251	45	206

June, '96.

Gross.	Rep.	Net.
107	20	87
101	8	93
208	28	180

Cross-examination of C. A. CHANDLER.

Mr. WHEATON:

Q. This memoranda that you put in, show the number of the machines disposed of, do they?

A. Yes, sir. To the best of my knowledge, those had the Diehl standard, but we cannot tell for a certainty. The heads and cabinet-work is all the records we have, as a rule. Our reports are made up in that way.

HERMAN CRAMER, recalled in his own behalf.

Mr. MILLER:

Q. Mr. Cramer, I hand you this bundle of small models, marked Plaintiff's Exhibit "T," and ask you to state what they are, and when they were made, and by whom.

A. These paper models, the outlines, were marked by me and part by my daughter. I got her to do this. I instructed her how to do it, and she did it for me, that is, some of these. She done that in June, 1880.

Q. Who put the date on those models?

A. I did myself, in June, 1880, about the time they were made.

362 Q. For what purpose did you make the models?

A. For the purpose of remembering it. These models were made after I had made the large ones; after I got the large one complete. I mean the large working model, or large machine.

Q. When did you make the large working machine?

A. I had them completed this month, June, 1880. After I made

the large working machine, then I made these paper representations as a memorandum, and from this one here I cut the tin; made the tin model, that I sent to Munn & Co., to illustrate the patent. They are patent solicitors of New York, who took out my patent for me, or the ones that completed it.

Q. When did you say was the first machine embodying your invention which you sold?

A. In the year 1881.

Q. So that you made the first machine which you had, embodying the idea, in 1880?

A. Yes, sir; and in 1881 I proceeded to sell the first machine. I did not actually sell any machine in 1880, although I had made several of them in 1880, before June, 1880. They were complete. I was working on quite a number of models. I got them complete in June, 1880, and the next year after that, 1881, I sold the first machine.

Cross-examination of HERMAN CRAMER.

Mr. WHEATON:

Q. What did you pay for those American machines?

363 A. All the way, according to the amount I bought at one time, and the different styles of machines. I bought American machines—I also bought some second-hand ones, for which I did not pay more than $5, and from $5 to $40.

Q. What would you sell a machine for that you paid $5 for?

A. The machine that I bought at $5 was a second-hand machine. That I repainted, and refitted it up, done perhaps $10 or $15 worth of work on it—I could not tell you exactly the amount, and I sold it for $45 or $50, just as I had a chance, and just as the customer happened to want it, on time or cash. The machines that I paid $40 for were new machines. I sold them for $90, and $95, and $100. I should say, I don't remember now the exact price, but I think that is it, $95 or $100.

Q. I understood you to say that you sold those machines that you paid $40 for, for $90 or $95?

A. Yes, sir.

Q. What was the highest price that you sold one of these machines for in 1895 or 1896, that did not have your treadle in it?

A. I think I was pretty well run out of the business at that time. I could not tell you. Yes, I was pretty well run out of the business. I don't know whether I sold any that year.

Q. Did you sell any in those two years?

A. I don't believe I have.

Q. Do you know when you sold the last machine that had your treadle in it?

A. About 1884, I think; 1884 or 1885.

Q. 1884?

364 Q. I think so; 1884 or 1885. 1884, I think. I did not keep no memorandum. I could not positively state as to the date when I sold my last machine.

Plaintiff's counsel here rested his case.

Defendant's counsel thereupon moved the court to instruct the jury to bring in a verdict for the defendant, upon the following grounds:

1. For the reason that said claim 1 of the patent does not cover any patentable invention.

2. Because no infringement has been proved.

3. Because there is no evidence whatever of any damages sustained by the plaintiff.

The COURT: The motion to instruct the jury to find for the defendant will be denied.

Mr. KALLOCH: I will now read the deposition of Mr. Henry L. Brevoort, taken by Mr. Offield on the part of the defendant, in the case of Herman Cramer *vs.* Willis B. Fry, tried in this court, omitting the formal parts of the deposition, the affidavits and certificate of the officer before whom the depositions were taken. The testimony commences as follows:

"Defendant's counsel here offers in evidence certified copy letters patent granted Herman Cramer, dated January 30, 1883, No. 271,426, for an alleged improvement in sewing-machine treadles with accompanying file-wrapper and contents, and requests that the same be marked 'Defendant's Exhibit Cramer Patent File-wrapper and Contents.'"

I will now read, before proceeding with the deposition, the
365 file-wrapper and contents of the Cramer patent, which is sued upon here, and which is referred to in the introductory part of the deposition. The copy from which I read was introduced in the Fry case.

The COURT: You should explain to the jury, Mr. Kalloch, that this is a document that comes from the Patent Office at Washington, and contains the record of the proceedings of the Patent Office with respect to this patent. Now proceed.

Mr. KALLOCH: The first page is the certificate showing that it is a correctly certified copy, which I will not read. The first page of the file-wrapper after the certificate is Mr. Cramer's application, date:

"SONORA, *May 16th*, 1882.

"To the Hon. Com'r of Patents, Washington, D. C.

"D'R SIR: With this please find P. O. order payable to the Commission- of Patents bought by Herman Cramer and application for patent with drawing & specification The P. O. order is for $15. office fee for patent.

"Respectfully, STREET & STREET,
"Att'ys for H. Cramer,
"Sonora, Tuolumne Co., California."

Then the case was sent to the examiner by the order of the Commissioner, and new specifications were made.

"To the Commissioner of Patents, Washington, D. C.:

"Your petitioner prays that letters patent may be granted to him as the inventor for the invention set forth in the annexed specification.

"HERMAN CRAMER."

366 Then follows the specification, the first on file by Mr. Cramer, as follows:

"I, Herman Cramer, of the city of Sonora, in Tuolumne county, in the State of California, have invented certain improvements in a treadle, to be used in sewing machines, or other machinery where a noiseless treadle may be required, of which the following is a specification:

"My invention consists of the usual platform marked 'A' in Fig. 1 of diagram on treadle bar. The ends of said treadle bar, marked 'B,' are shaped like the letter V and rest in socket in lower end of a brace 'C,' the socket being ♥ shaped, the brace 'C' cast in one piece, and the treadle bar and platform on the bar is also cast in one piece.

"The treadle bar rests in socket in brace 'C,' which is immediately above a cross-brace usually in machines to keep them from spreading apart, the nut on end of cross-brace is marked 'D.' Letter 'M' immediately beneath cross-brace and treadle bar is an oil-receiver to retain any drippings of oil from the bearings of treadle bar.

"My invention consists in having the ends of the treadle bar V-shaped to fit in hole in brace 'C,' also ♥ shaped to receive the ends of the treadle bar.

"This V-shaped treadle bar in brace 'C' entirely prevents noise from the tr-adle, is self-adjusting and does away with the necessity of cones and set-screws now in use. This I claim as my invention. Fig. 1 represents platform

[Matter enclosed between rules erased in copy.]

'A' and treadle bar, the ends of which are V-shaped and marked 'B.'

367 "Fig. 2 represents the lower end of brace 'C' with hole shaped to receive the ends of treadle bar 'B.' 'D' represents nut on end of cross-brace immediately below treadle bar.

"HERMAN CRAMER.

"Witnesses:
"FRANK W. STREET.
"CHARLES L. STREET."

Then follows the oath:

"STATE OF CALIFORNIA, }
County of Tuolumne. }

"Herman Cramer, the above-named petitioner, being duly sworn, deposes and says that he verily believes himself to be the original and first inventor of the improvement in a noiseless self-adjusting treadle described in the foregoing specification, that he does not know and does not believe that the same was ever before known or used and that he is a citizen of the United States.

"HERMAN CRAMER.

"Subscribed and sworn to before me this 15th day of May, A. D. 1882.

"C. L. STREET,
"*Notary Public.*"

Then follows a letter from the examiner, dated:

"UNITED STATES PATENT OFFICE,
"WASHINGTON, D. C., *May 29th*, 1882.

"Treadle for sewing machine, etc. Filed May 25, 1882. No. 62,397.

"Herman Cramer, care Street and Street, Sonora, Cal.:

"The application is not prepared in conformity with the
368 rules of the office. The specification is written on both sides of the pages, while the rules direct that it should be written on one side of each page only.

"No claim is appended to the specification. The oath is incomplete, as section 39 of the rules require applicants to state under oath if the invention has been patented to them, or with their knowledge and consent to others in any foreign country, and if so,

[Matter enclosed between rules erased in copy.]

the number, date and place of such patent or patents. Reference is made to the patent to G. W. Gregory, No. 256,563, April 18, 1882, which exhibits the alleged invention.

"A. SCHOEPF, *Examiner.*"

Then follows specifications substituted by Mr. Cramer's attorneys for the first, which I have already read, entitled as follows:

"Specification forming part of application filed May 25th, 1882, by Herman Cramer for sewing machine, etc.

"I, Herman Cramer, of the city of Sonora, in Tuolumne county, in the State of California, have invented certain improvements in a treadle and brace to be used in sewing machines or other machinery where a noiseless treadle may be required of which the following is a specification.

"My invention consists in a combination of the usual platform marked 'A,' in Fig. 1 of diagram on treadle bar. The ends of said treadle bar marked 'B' are to bear against mufflers.

"The treadle-bar bearings are in and on brace 'C.' The treadle bar rests in socket in brace 'C' which is immediately above a cross-bar usually in machines to keep them from spreading apart.

369 "The nut on end of cross-bar is marked 'D.' Letter 'M' immediately beneath cross-bar and treadle bar is an oil-receiver to retain any drippings of oil from the bearings of treadle bar.

"The treadle bar, mufflers and brace 'C' are held between the right and left legs of the machine by means of a brace bar underneath the treadle bar.

"This brace and socket or bearing in or on brace is in one piece.

"The treadle bar with mufflers on the ends working or bearing in or on brace entirely prevents noise from the treadle is self-adjusting and does away with the necessity for cones and set-screws now in use.

"Fig. 1 represents platform 'A' and treadle

[Matter enclosed between rules erased in copy.]

bar the ends of which may be V-shaped or any shape to suit marked 'B.'

"Fig. 2 represents the lower end of brace 'C.'

"'D' represents nut on end of cross-bar immediately below the treadle bar.

"What I claim is a combination of brace 'C' with socket or bearing in it or on it, to receive the treadle bar with the mufflers at the ends of treadle bar or in or on brace 'C' in connection with said brace 'C' and the treadle bar in connection with brace 'C' and mufflers to work in or on brace 'C' substantially as set forth.

"HERMAN CRAMER.

"Witnesses:

"CHARLES L. STREET.

"FRANK W. STREET."

Then follows the oath as before, which I will not read.

Then follows this:

370

"UNITED STATES PATENT OFFICE,

"WASHINGTON, *August 14th*, 1882.

"Treadle. Filed May 25, 1882. No. 62397.

"Herman Cramer, care Street and Street, Sonora, Cal.:

"Applicant's amended claims are met by the patent to J. E. Donovan, June 28, 1881, No. 243,529, in view of which a patent is again refused."

That is signed by the examiner.

Then follows a power of attorney:

"I hereby appoint O. D. Munn and A. E. Beach, the firm of Munn & Co., of the cities of New York and Washington, or their accredited agents, to withdraw the specifications and drawings of my application for letters patent for sewing-machine treadle filed on or about May 25th, 1882, serial No. 62,397, and to make such amendments and to the same extent transact such other business with the department pertaining to this application as is vested in Messrs. Street and Street of Sonora, Cal., whose power of attorney, attached to the specification aforesaid, is hereby revoked," which power of attorney was signed at Sonora on the 20th day of September, 1882, by Herman Cramer, and witnessed by Mr. Street.

Then follows a letter:

[Matter enclosed between rules erased in copy.]

"SONORA, *Aug.* 3*rd*, 1882.

"Hon. Com'r of Patents, Washington, D. C.

"D'R SIR: We herewith send specification, of claim of
371 Herman Cramer for patent, in place of informal specification, sent with diagram filed May 25, 1882, series No. 62,397, as per your instructions in letter of May 29, 1882.

"Respectfully yours, STREET & STREET,
"*Att'ys for Applicant.*"

That letter accompanied, as it appears, the amended specification which I read a few moments ago.

Then follows a letter from Munn & Co.:

"To the Commissioner of Patents:

"In the matter of the application for letters patent for sewing-machine treadle, by H. Cramer, filed May 25, 1882, we file herewith a new drawing in this case."

Signed Munn & Co., and dated Washington, D. C., Oct. 17, 1882.

Then follows an affidavit by Mr. Cramer, which was attached to the specification which I have just read, and which is similar to the first affidavit read.

Then follows another substituted specification, addressed to the Commissioner of Patents:

"In the matter of my application for letters patent for sewing-machine treadle filed May 25, 1882. I hereby amend my specification as follows:

"Cancel all the specification, except the signatures and substitute as follows:

"To all whom it may concern:

"Be it known that I, Herman Cramer, of Sonora, in the county of Tuolumne and State of California, have invented a new and improved sewing-machine treadle; and I do hereby declare that
372 the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification.

"My invention relates to improvements in the bearings of sewing-machine treadles, and it has for its object to provide means, first, to keep the treadle bearings rigidly in line and at a fixed distance apart to avoid friction, and second, to make its movement in use, noiseless. To this end my invention consists in the construction and combination of parts hereinafter fully described and claimed, reference being had to the accompanying drawings in which

"Fig. 1 is a perspective view of a portion of a sewing machine showing my invention.

"Fig. 2 is a transverse vertical section through one bearing of the treadle.

"A represents the treadle provided with the usual pitman con-

nection by which to run the sewing-machine wheel. B represents the two trunnions cast as a portion of the treadle and extending from its sides into loop-holes in the common cast-iron cross-brace C. These trunnions are sharpened to an edge or corner along their lower sides, and the lower end of the loop-hole is hollowed to an angle more obtuse than the edge of the trunnion, to serve as a bearing for the same and permit the rocking motion common to treadles.

C represents the usual cast-iron double brace connecting the two end legs diagonally in a plane generally vertical. The lower ends of this brace are secured directly to the web of the legs by bolts *d*, and for convenience and strength I make the two ends of the common cross-bar D, serve as these bolts. The upper ends of the
373 brace are secured as usual, either to the web of the legs or to the table of the machine near the legs. The treadle and its trunnion bearings are wholely independent of the cross-bar D, except its service as stated, to hold the brace to the legs. The bearing holes in the brace are formed into long vertical loops to permit the entrance of the treadle.

"Pieces of leather F, or other soft material, cover the top and end of each trunnion to serve as cushions to keep the same close in its bearing, to prevent the noise which would result were the trunnions permitted to bounce, and thump endways, when the treadle is in motion. The leather F is fitted to the curve of the upper side of the trunnion, which is an arc of a cylinder whose center of oscillation is the lower edge of the trunnion; the same leather also interposes between the end of the trunnion and the adjacent iron. *f* is a block serving as a mere backer to which the cushion F is attached. This block conforms to the back and top side of the cushion and fills the loop-hole in the brace above the trunnion. It also has tangs or projections *e*, resting in suitable recesses in the brace C, which are held between the brace and the web of the leg E, by which means the block and cushion are held in place. Below the bearings of the trunnions B, I provide cups M attached to the ends of brace C, to catch the oil that usually drips from such bearings.

"By this construction my treadle bearings are rigidly fixed and in no way liable to get out of line or to require adjustment; the usual noise is prevented, and overflowing of oil is caught before it can do damage.

374 "I am aware that sewing-machine treadles have before been provided with V-shaped bearings and I do not claim the same as my invention but

"What I claim and wish to secure by letters patent is

"1. The vertical double brace joining the legs of the two ends of a sewing machine, provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings substantially as specified.

"2. The sewing-machine legs E, the vertical double brace C secured thereto and provided with holes to serve as bearings for the treadle A and the treadle provided with trunnions B to oscillate

in said bearings, in combination with the cushion F and the block *f* as and for the purpose specified.

"HERMAN CRAMER,
"Per MUNN & CO., *Attorneys*."

Then Mr. Cramer's attorneys, Munn & Co., say to the examiner:

"A new oath is herewith filed. Gregory, referred to"—gentlemen, these references to Gregory and Donovan, referred to by Mr. Munn, are to patents which have already been suggested by the Patent Office as the reason why the claim was rejected. It was in answer to that suggestion by the examiner that this statement is made.

"Gregory, referred to, pivots the grooved trunnions of his treadle upon knife-edges secured within the upper loops of two collars, which are secured to the cross-bar by means of set-screws to keep them from turning. Donovan pivots his treadle upon its
375 trunnions having sharpened edges, in grooves in the cross-bar, where it is held by collars provided with flanges projecting over the trunnions. Applicant pivots his treadle upon the sharpened edges of its trunnions in loop-holes in the two ends of the brace which is bolted to the legs of the machine by the two ends of the cross-bar. This service of the cross-bar might be as well performed by two short bolts; but the bar being a usual cross-tie to stiffen the legs, applicant uses its ends as bolts to hold his brace ends to the legs. We have rewritten the specification to elucidate the inventor's claim. Should the case meet with favorable consideration a new drawing will be furnished. For the purpose of examination see pencil sketch on sheet of drawing filed.

"Your ob't servants, MUNN & CO."

Then follows a letter from the examiner again to Herman Cramer, care of Munn & Co., dated Washington, D. C., October 19, 1882: "The case has been reconsidered in connection with the substituted specification filed the 17th inst., and the examiner holds that the references previously cited—that of Gregory in particular—meets the alleged invention. The case is accordingly rejected." Signed by the examiner.

In answer to that follows a letter from Munn & Co., Mr. Cramer's attorneys, directed to the Commissioner of Patents:

"In the matter of the application for letters patent for machine treadle by H. Cramer. Filed May 25, 1882.

376 "The examiner will please notice that applicant's invention places both bearings of the treadle in the cross-brace.

"By this means they may be made perfectly true in line either by casting or drilling and they cannot be thrown out of line either by use or by the most awkward setting up.

"Therefore, one source of friction is avoided. All the references have shown bearings made of two separate pieces which could read-

ily be set up out of line or even be worked loose. The advantage is obvious.

"A reconsideration is respectfully asked.

"Your obedient servants, MUNN & CO."

Then there are no further communications. There is a formal notification to Herman Cramer that the patent has been allowed, and a memorandum of fees, and index of the contents, followed by a copy of the patent, which has been introduced in evidence. I will ask to have these marked.

Mr. MILLER: It is already marked.

Mr. KALLOCH: These exhibits may all be considered as they are read and introduced with the depositions as marked. It will be unnecessary to mark them, if they may be considered in this case, and used in connection with the depositions.

Mr. OFFIELD: With the identification marks in the former case.

Mr. KALLOCH: They are all identified by marks made in the Fry case.

377 Then, resuming the deposition of Mr. Brevoort, the next offer by counsel was "Certified copy English letters patent granted Jules Bourdin, dated June 27, 1874, No. 2,232, an improvement in sewing machines, and requests that the same may be marked 'Defendant's Exhibit Bourdin 1874, English Patent.'"

The Bourdin patent was here introduced in evidence and the specification read to the jury, the following being a copy thereof:

"Transmitting motive power to sewing machines.

"Letters patent to Jules Bourdin, of No. 10 Rue de la Fidelite, Paris, in the Republic of France, civil engineer, for the invention of 'Improvements in means for transmitting motive power to sewing machines.'

"Sealed the 11th December, 1874, and dated the 27th June, 1874.

"Provisional specification left by the said Jules Bourdin at the office of the commissioners of patents, with his petition, on the 27th June, 1874.

"I, Jules Bourdin, of No. 10, Rue de la Fidelite, Paris, in the Republic of France, civil engineer do hereby declare the nature of the said invention for 'improvements in means for transmitting motive power to sewing machines,' to be as follows, that is to say:

"My invention consists in keying a pulley on the main spindle of the sewing machine; under the felloe of this pulley on the right and left hand sides are two discs or pieces which turn on the spindle, and which have on their peripheries (which approach very near to the under side of the felloe of the pulley without touching it) two, three, or more recesses, deeper on one side than on the other.

378 In these recesses I place India-rubber balls. Motion is communicated from the treadle or treadles to projections or bosses on the recessed pieces by means of cords which wind thereon, and pass into the groove of a loose pulley fixed to the under side of the

stand of the machine. These cords are fixed to the treadle or treadles in such a manner that the alternate movement of the treadle forcing the balls to catch between the periphery of the side pieces and the surface of the felloe of the pulley forces this pulley to turn. The pulley can only turn in one direction because the reverse movement of the side pieces disengages the balls and prevents the drawing along of the pulley.

"Specification in pursuance of the conditions of the letters patent filed by the said Jules Bourdin in the Great Seal Patent Office on the 15th December, 1874.

"To all to whom these presents shall come, I, Jules Bourdin, of No. 10 Rue de la Fidelite, Paris, in the Republic of France, civil engineer, send greeting:

"Whereas, her most excellent majesty Queen Victoria, by her letters patent, bearing date the twenty-seventh day of June, in the year of our Lord one thousand eight hundred and seventy-four, in the thirty-eighth year of her reign, did, for herself, her heirs and successors, give and grant unto me, the said Jules Bourdin, her special license that I, the said Jules Bourdin, my executors, administrators, and assigns, or such others as I, the said Jules Bourdin, my executors, administrators, and assigns, should at any time agree with and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great
379 Britain and Ireland, the Channel islands, and isle of Man, an invention for 'Improvements in means for transmitting motive power to sewing machines,' upon the condition (amongst others) that I, the said Jules Bourdin, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said letters patent.

"Now know ye, that I, the said Jules Bourdin, do hereby declare the nature of my said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, reference being had to the drawings hereto annexed and to the figures and letters marked thereon, that is to say:

"My invention consists in keying a pulley on the main spindle of a sewing machine; under the felloe of the pulley on the right and left hand sides are two discs or pieces which turn on the spindle, and which have on their peripheries (which approach very near to the under side of the felloe of the pulley without touching it) two, three, or more recesses, deeper on one side than on the other. In these recesses I place India-rubber balls. Motion is communicated from the treadle or treadles to projections or bosses on the recessed pieces by means of cords which wind thereon and pass

into the groove of a loose pulley fixed to the under side of the stand of the machine.

380 "These cords are fixed to the treadle or treadles in such a manner that the alternate movement of the treadle forcing the balls to catch between the periphery of the side pieces and the surface of the felloe of the pulley forces this pulley to turn. The pulley can only turn in one direction because the reverse movement of the side pieces disengages the balls and prevents the drawing along of the pulley. Or the recessed discs may be fixed and the pulley loose.

"Having thus described the nature of my said invention, I will now proceed to more particularly describe the same by reference to the accompanying drawing in which figure 1 is a plan, and figure 2 a section, showing the arrangement I prefer employing, the pulley being loose and the recessed pieces fixed; figures 4 and 5, section and elevator, showing this arrangement applied to the stand of a sewing machine; and figures 6 and 7, sections showing the arrangement I employ when the pulley is fixed and the recessed discs loose.

"In figures 1 and 2, K is a metallic cylinder closed at both ends by two wooden discs R, the whole forming a loose pulley or drum on the spindle or shaft B which passes through it. In the interior of this loose pulley or drum I place a piece C fixed on the shaft B by means of a screw N, or by any other suitable means. This piece is made of cast zinc or otherwise, and is constructed of two cheeks or discs in the space between which the recesses D, D, D, are cut out, having such a form that the distance from the side of each recess to the cylinder K becomes less the further it recedes from the bottom.

In each recess is placed a loose India-rubber ball E; from
381 this arrangement it follows, that if the loose pulley is made to move in the direction of the arrow, one at least of the three balls will be drawn along, then compressed between the cylinder K and the piece C, and consequently will force this latter to turn with the spindle B to which it is fastened. If the movement takes place in the contrary direction, the balls having a tendency to be thrown back constantly to the bottom of their respective recesses, the piece C and the spindle B will remain stationary during the movement of the pulley A, K. It will thus be seen that if a cord is wound round this pulley and is drawn alternately from one side to the other, the movement of the spindle B will take place always in the same direction. To obtain a greater speed all that is necessary is to wind the cord not upon the pulley or drum K, but on a boss or neck K 1 formed on the elongated part of one of the sides A, as seen in figure 3.

"Having described the principle of my invention, I will now show an example of its application to a sewing machine.

"It will be understood that these means may be applied to any other system of sewing machine, and in general to all machines wherein a spindle or shaft is put in motion by means of an alternate movement.

"In figures 4 and 5 is the spindle on which I place two pulleys or

A.D. 1874, June 27, N° 2232.
BOURDON'S Specification.

FIG. 1.

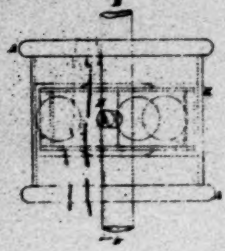


FIG. 2.

FIG. 3.

FIG. 4.

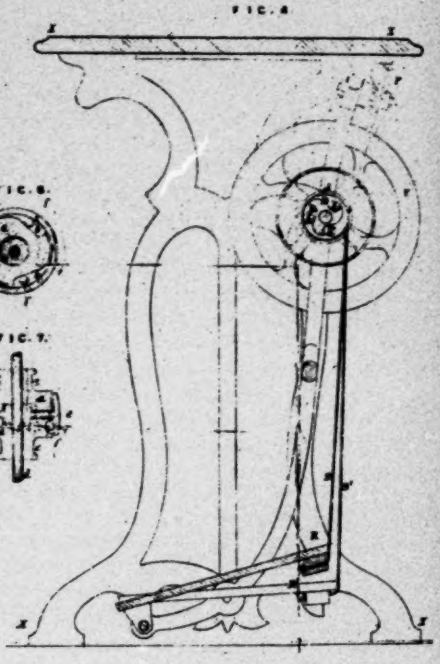


FIG. 6.

FIG. 7.

The third drawing is not ordered.

London: Printed for Her Majesty's Stationery Office, 1875.

No. 11806

Specification Complete 1897 English Patent Office

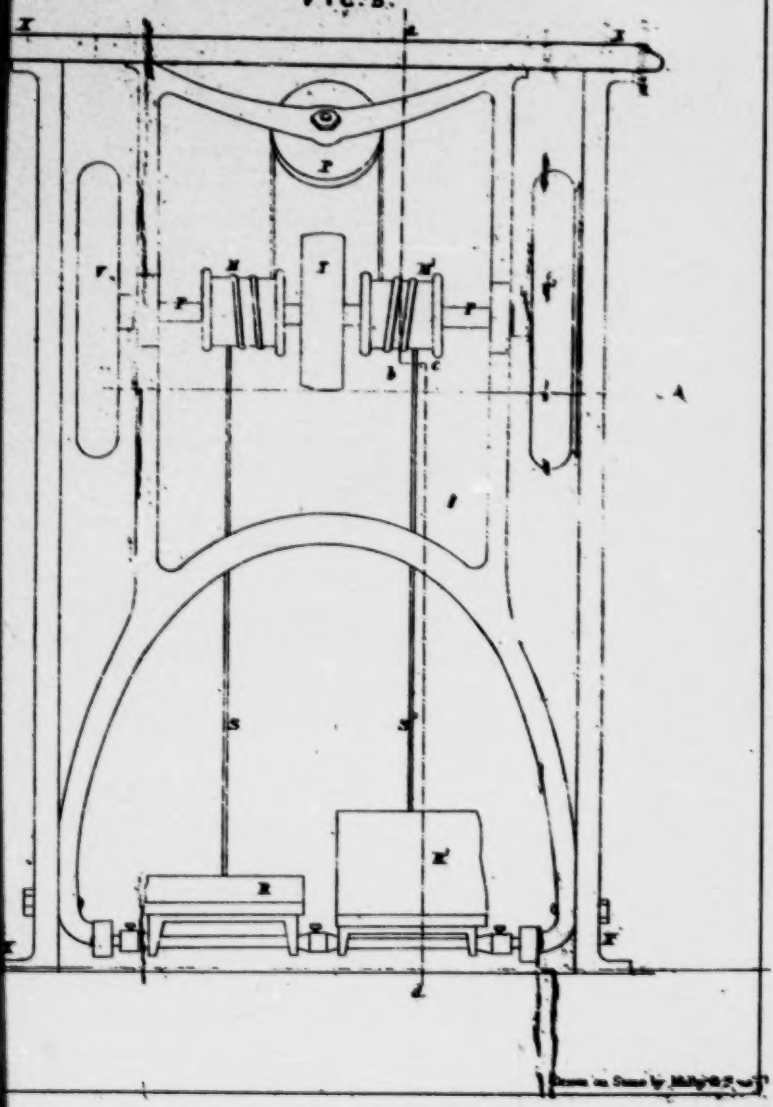
Opened for public Inspection Dec. 3 1897

W. Johnson, Clerk

By W. H. Haughton, Deputy Clerk

11 SHEETS

FIG. 5.



drums M, M 1, similar to that shown in figures 1 and 2, and I wind on these pulleys the cords S, S 1, of the treadles R, R 1, causing it to pass over a return pulley P fixed on a part of the frame or stand X.

It will be seen that one of the treadles R draws the shaft F
382 in descending, and that as soon as its action has ceased that of the treadle R 1 commences and forces the shaft F to continue the movement in the same direction; V, V 1, are fly-wheels to assist in regulating this action.

"In figures 6 and 7, in which a fixed pulley and loose recessed discs are employed; *c* is the pulley keyed on the spindle *d* of the sewing machine; *a*, *a*, are the recessed discs, one on each side of the pulley, and loose on the spindle *d*; *b*, *b*, *b*, are the recesses in the discs *a*; *f*, *f*, are the India-rubber balls placed in the recesses *b*, *b*; *e*, *e*, are the bosses on which each side of the discs *a* over which the cords from the treadles pass.

"Having now described the nature of my invention and the best means with which I am acquainted for carrying the same into effect, what I claim is, the employment of a loose pulley in combination with a recessed piece fixed on the driving spindle and India-rubber balls; or of a fixed pulley in combination with loose recessed pieces, and balls for obtaining by means of the alternate movement of the feet the continuous circular movement of the spindles of sewing machines, substantially as hereinbefore described and represented in the accompanying drawing.

"In witness whereof, I, the said Jules Bourdin, have hereto set my hand and seal, this ninth day of December, in the year of our Lord one thousand eight hundred and seventy-four.

"JULES BOURDIN. [L. S.]"

(Here follow photographs marked pp. 383 & 384.)

Mr. KALLOCH: That patent is dated June 27, 1874, and the drawings which accompany it, and which have been referred to in the specifications which I have read, are upon this sheet.

(The drawings referred to were here shown to the jury, the following being photographic copies thereof:)

385 A JUROR: As I understand this English patent, is it a patent in the United States?

The COURT: That will be explained to you. The question is, whether or not the invention was in existence at the time.

The JUROR: I want to know it being an English patent, whether that has any weight in connection with an American patent?

The COURT: Yes. It depends upon when it was granted. The question is, whether it is an invention; whether the American patent covers an invention. If the same thing has been invented elsewhere, and there is a patent for it in Great Britain, it would not be an invention here.

The JUROR: To make it more clear: Suppose it is not patented in the United States, and six or eight people in the United States

manufacture this device. In my idea they are not liable for making it in the United States, as it is not patented.

The COURT: That is not the question in this case. What is the date of this English patent?

Mr. MILLER: 1874.

The COURT: And it is introduced as anticipation?

Mr. MILLER: I don't know what it is introduced for.

The COURT: Is it set up in your answer?

Mr. KALLOCH: Yes, in the notice of special matter.

Mr. WHEATON: It is introduced for the purpose of showing treadles.

The COURT: The condition of the art?

386 Mr. WHEATON: Yes, that is what it amounts to; to show the treadles were hung in the cross-braces long prior to Mr. Cramer's invention in 1880. I do not think myself it is an invention covered by Mr. Cramer's first claim, but it would be an invention if that claim should have the interpretation for it which Mr. Miller claims for it; that is, it shows a treadle hung in the cross-brace.

The COURT: What I want to understand is, in order that the juror may have his question properly answered, as to what is the purpose of this patent, and the model that accompanies it. Is it anticipation, or the state of the art?

Mr. WHEATON: That depends upon what construction is given to the first claim. Mr. Miller is claiming that the first claim of the Cramer patent should be simply read as the hanging of the treadle in the brace, leaving out the trunnions, and the construction, and all of that. If the court should construe the claim that way, then this British patent becomes an anticipation; that is, if we are correct about it, because there the treadle is hung in the brace. If the construction of claim 1 of the Cramer patent, as we contend for it, that it requires treadles, trunnions, and the brace, and the hole through the lower extremity of the brace, to serve as bearings, and the treadle and trunnions which are fitted to oscillate in

387 those bearings, then it would not be an anticipation, but would simply show the state of the art.

The COURT: In other words, it is the famous gun business; it will mount so that it will hit anyhow?

Mr. WHEATON: In either event, it proves that Mr. Cramer was not the first or original inventor of the hanging of the treadle in the cross-brace.

The COURT: Do you understand it now, gentlemen?

The JUROR: As I understand, the cross-brace is connected with the leg at both ends.

The COURT: This is for the purpose of showing whatever it does show. It is for the purpose of showing that mechanism or construction. We will not argue the case now, gentlemen.

Another JUROR: After all the nice things that these gentlemen will say pro and con, are we not capable, think you, after your honor's elegant charge, to go out and find a verdict? I want to find a verdict according to the evidence, according to my oath, and

I may promise, I think, that I am quite competent to judge about these things.

The COURT: That is the reason the law provides they should be submitted to you. I think there will be no trouble about it, gentlemen.

Mr. KALLOCH: Proceeding with Mr. Brevoort's deposition, the next matter introduced in evidence was:

388 "U. S. letters patent granted John E. Donovan, dated June 28th, 1881, No. 243,529, for an improvement in sewing machines, table frame and treadles, and requests that the same may be marked, 'Defendant's Exhibit Donovan, 1881, table frame and treadle patent,'" and the same was marked as an exhibit.

This, you will recollect, gentlemen, was one of the patents referred to by the examiner in the file-wrapper and contents.

(The patent referred to was here read to the jury, the following being a copy of the specification and drawings:)

391 UNITED STATES PATENT OFFICE.

JOHN E. DONOVAN, of Cincinnati, Ohio.

Sewing-machine Table-frame and Treadle.

Specification forming part of Letters Patent No. 243,529, dated June 28, 1881. Application filed May 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, John E. Donovan, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful improvements in sewing-machine table-frames and treadles, of which the following is a specification.

My invention relates to improvements in sewing-machine frames; and it consists, first, in constructing the frame for the table and arranging the parts of the sides of the frame so that a V-shaped bearing adapted to support a knife-edge treadle-bar is provided centrally at the bottom of each side of the frame; and, secondly, in attaching the lower ends of the central brace-bar at each side of the frame and vertically over the treadle-bar in its bearings.

A third feature of my invention consists of an inclined shoulder placed on each end of the treadle-bar vertically over the journal-points and secured in position by means of an inclined lug resting upon the inclined shoulder of said treadle-supports, so as to secure the treadle-bar in position, and thereby prevent vertical and end play.

Another feature of my invention consists in providing a bracket upon the central arch-brace of the table-frame, which is provided with an enlarged hole, to which is attached a shield-yoke, to which are attached the crank-journals of the driving mechanism.

The object of my invention is to secure a more substantial table-frame to the driving mechanism and provide adequate means for the employment of V-shaped treadle-bearings, so as to obviate the difficulty heretofore occasioned by lost motion, consisting in vertical and endwise play of the treadle bar or shaft.

Other features of my invention will be fully set forth in the description of the accompanying drawings.

(Here follow diagrams marked pp. 389 & 390.)

In the accompanying drawings, figure 1 is a perspective view of a sewing-machine frame embodying my invention. Fig. 2 is a broken sectional plan on line *x x*, Fig. 1. Fig. 3 is a longitudinal section on line *y y*, Fig. 1. Fig. 4 is a detail perspective view of the treadle-bar and attaching-button. Fig. 5 is a broken detail elevation of the bracket on the central arch brace-bar for attaching yoke for driving mechanism, showing screw in section. Fig. 6 is a broken end elevation of the treadle-bar and bearing with fastening-plate re-

1926

389

(No Model.) 3 Sheets—Sheet 1.

J. E. DONOVAN.

Sewing Machine Table Frame and Treadle.

No. 243,529. Patented June 28, 1881.

Fig. 1.

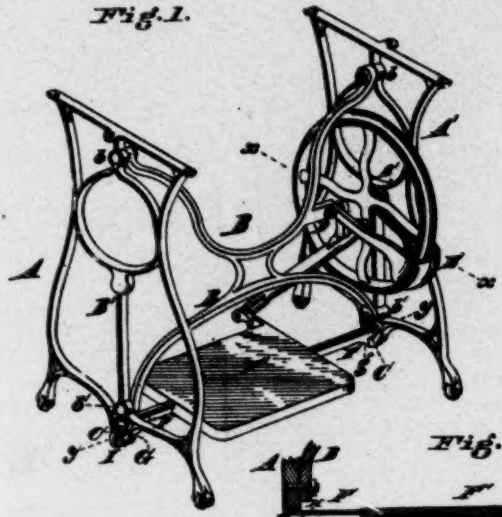


Fig. 3.

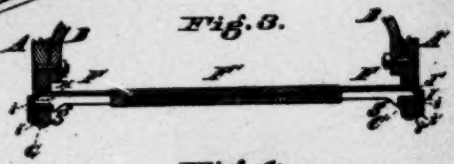


Fig. 2.

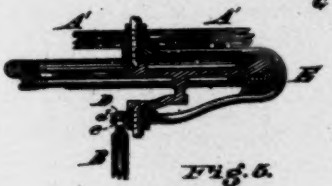


Fig. 4.

Fig. 5.

Fig. 7.

Fig. 6.

Witnesses:
Jno. E. Donovan
Eugene L. Parkhurst

Inventor
John E. Donovan
by Woods & Boyd
his Attorneys

(No Model.) 2 Sheets—Sheet 2.

J. E. DONOVAN.

Sewing Machine Table Frame and Treadle.

No. 243,529. Patented June 28, 1881.

Fig. 8.

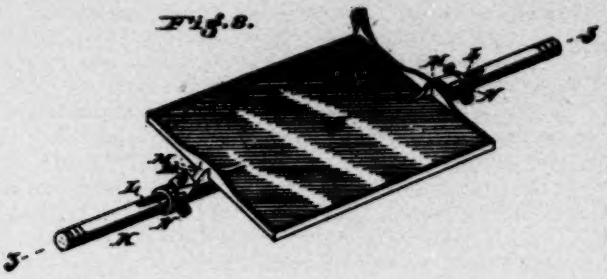


Fig. 9.

Fig. 10.

Attest
Jno. A. Jones
Eugene L. Gardner

Inventor
John E. Donovan
by Wood & Boyd
his attorneys

moved. Fig. 7 is a detail perspective view, showing the inner face of the fastening-plate for the treadle-bar. Fig. 8 is a perspective view, showing a modified form of mounting treadle upon knife-edge bearings with inclined adjusting devices. Fig. 9 is a longitudinal central section of the same on the line *z z*, Fig. 8. Fig. 10 is a transverse section on line *z' z'*, Fig. 9.

A A' represent the two end pieces which form the legs or sides of the table-frame.

B represents a double arch brace-bar, which is secured by four bolts to the sides A A'.

b b represent bosses provided on the sides A A', to secure requisite strength for attaching the arch brace-bar B to the sides A A'.

B' represents a central vertical bar cast with and forming a part of the sides A A'. It is provided with bosses *b' b'*, through which pass bolts for attaching the lower ends of the arch brace-bar B.

C represents V-shaped treadle-bearings, which are placed vertically under the arch-bar B, or centrally in the bottom of the sides A A'. The bearing-supports are preferably made by coring out the frame in the manner shown in the drawings. It is obvious that other forms of supporting these bearings may be provided.

D represents a bracket or arm projecting from the central brace, B, as shown in the drawings.

E represents a yoke and shield, to which the crank-journals of the driving-wheel are attached. The method of mounting the driving-wheel and attaching the crank-journals is clearly shown in letters patent numbered 225,809, granted me March 23, 1880. In order to overcome the springing of this yoke, the lug or bracket D is cast upon the brace B and projected off so as to come opposite the end of the yoke E, and a screw-bolt attaches the yoke E firmly to the lug D. *e* represents an enlarged screw-hole pierced through the face of lug or bracket D, through which passes the screw *d*. This enlargement of the hole *e* allows the attachment of the parts without fitting or springing thereof, and provides much stronger support than could otherwise be attained. Instead of casting
392 this lug on the brace B, it might be cast onto the end of the yoke E, and then secured to the brace B by a screw in a similar manner. This feature of my improved sewing-machine frame is a very important one, as it firmly holds the parts rigidly in position and prevents their yielding to strains on the machine, which would otherwise occur when the machine is driven rapidly by the feet of the operator. This form of attaching the supporting parts of the frame and the bracing of the parts secures a very firm, substantial frame.

F represents a treadle-bar, which can be made of cast-iron and cast on and with treadle F'.

G represents a rounded knife-edge bearing on the treadle-shaft F.

g represents a shoulder. This shoulder may be omitted when my improved button-fasteners are used.

H represents an inclined shoulder upon the upper side of shaft F.

I represents a fastening-plate, which is attached to the base of the frame A A′ over the treadle-bearings by a screw passing through the slot *i*.

I′ represents an inclined lug or shoulder which projects inward and rests upon the inclined shoulder H.

When both buttons I I are adjusted so as one point of each touches the shoulders H H on the shaft F all lost motion of the treadle-shaft, both longitudinal and vertical, is taken up. As the shaft F and shoulders H rock backward and forward by the operation of the treadle F′, it is desirable to have the shoulders H rounded on their top faces, and the under side of the lug I′ may be made slightly convex, so that one point only will bear against the shoulder H, preventing friction and undue wearing of the parts. The slot *i* allows the accurate adjustment of the plate I.

i′ represents a teat on the inner face of the plate I, which rests in a corresponding elongated groove made in the face of the frame opposite the teat *i′*.

Figs. 8, 9, and 10 show a modified form of employing knife-edge bearings and inclined fastening and adjusting devices, in which K represents a treadle-shaft.

L represents oblong grooves cut in the upper face of the shaft or bar.

M M represent lugs cast on each side of the treadle J. The under sides of the lugs form rounded knife-edge bearings, which are loosely seated in the grooves L.

m m represent inclined shoulders similar in shape, purpose, and function to shoulders H, above described.

N N represent adjustable collars placed on the shaft K.

O O represent inclined lugs cast on said collars, projecting laterally over and resting against the shoulders *m*. These lugs O are similar in shape and function to the lugs I′ above described, and the adjustment of these lugs O against the shoulders *m* prevents lateral play of the treadle. The use of the inclined shoulders and fastening-lugs upon knife-edge treadle-bearings is a very important improvement.

Frequent attempts have been made to use knife-edge bearings for the treadle in sewing-machines; but it has been found to be difficult to prevent lateral lost motion and to adjust the parts so as to compensate for their wear and to prevent rattling of the treadle, which has been a serious objection in their employment. My herein-described improvements have overcome all the serious objections hitherto attending their use.

I claim—

1. A treadle-bearing for a sewing-machine frame, provided with knife-edge bearings having an inclined shoulder vertically over the journal-points, and secured in V-shaped rocker-bearings by means of an adjustable inclined lug resting upon the inclined shoulder of said treadle-supports, substantially as herein set forth.

2. A frame for a sewing-machine table, consisting of the side frames, A A′, the arched brace-bar B, the central vertical bars, B′, the knife-edge bearings *c*, arranged vertically under said bars, and

the rocking treadle-bar F, having at its ends the knife-edge bearings G, substantially as described.

3. In a sewing-machine table, the combination of the sides A A′, constructed with the bosses *b*, and the central vertical bars, B′, having the bosses *b′* at their lower ends, attached respectively to the bosses on the sides and on the vertical bars, substantially as described.

4. In a sewing-machine table-frame employing a U-shaped yoke for supporting the driving-wheel and crank-journals, a supporting-lug, D, for uniting the yoke-bearing with the arch-brace B, substantially as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN E. DONOVAN.

Witnesses:
JNO. E. JONES.
CHARLES H. AVERY.

393 Mr. KALLOCH: I will now proceed with the reading of the deposition. There was then introduced: "United States letters patent granted George W. Gregory, dated April 18, 1882, No. 256,563, for an improvement in treadle supports for sewing machines."

(The patent referred to was here read to the jury, the following being a copy of the specification and drawings:)

394*a*

UNITED STATES PATENT OFFICE.

GEORGE W. GREGORY, of Boston, Massachusetts, assignor to the Weed Sewing Machine Company, of Hartford, Conn.

Treadle-support for Sewing Machines.

Specification forming part of Letters Patent No. 256,563, dated April 18, 1882. Application filed November 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, George W. Gregory, of Boston, Suffolk county, State of Massachusetts, have invented an improvement in treadle-supports for sewing-machines, of which the following description, in connection with the accompanying drawings, is a specification.

This invention has for its object to support the treadle or foot-board of a sewing or other machine so that it may be moved with the minimum of friction.

(Here follows diagram marked p. 394.)

I am aware that V-shaped or scale bearings are old in connection with sewing-machine treadles—as, for instance, a long rod to which the treadle is secured has been provided at its ends in the side frames of the machine-stand with V-shaped bearings.

In this my invention, to insure cheapness of construction and facility of adjustment, I have adjustably secured to the usual cross-rod or brace which connects together the side pieces of the stand two collars, each of which is provided with a V-shaped bearing and a cap, and I have provided the treadle at each side with ears, each having Λ-shaped recesses at its under side, and rounded at its upper side to fit respectively the V-shaped bearing of one of the collars and be held down thereon by one of the caps.

Figure 1 represents in side elevation a sufficient portion of a sewing-machine treadle and co-operating parts to illustrate my invention, and Fig. 2 a sectional detail thereof.

The rod *a* is that commonly employed at the center of the usual cast-iron side pieces of a sewing-machine stand to hold the said side pieces properly together, the said rod in practice being connected with the said side pieces by nuts or screws in any usual way, not necessary to be herein shown. The rod has adjustably attached to it, at suitable distances apart, by screws *b*, two collars, *c*, one only of which is shown. These collars have upwardly-extended V-shaped bearings *d*, and over them a narrow cap, *e*, preferably formed as part of the collar *c*.

The V-shaped bearing is shown in Fig. 1 as driven into a dove-tailed groove, where it will be held firmly. The V-shaped bearing, being separate, may be made of steel or other than cast-iron; but, if desired, this V-shaped bearing may be cast as part of the collar *c*.

(No Model.)

G. W. GREGORY.

TREADLE SUPPORT FOR SEWING MACHINES.

No. 256,563. Patented Apr. 18, 1882.

Fig: 1

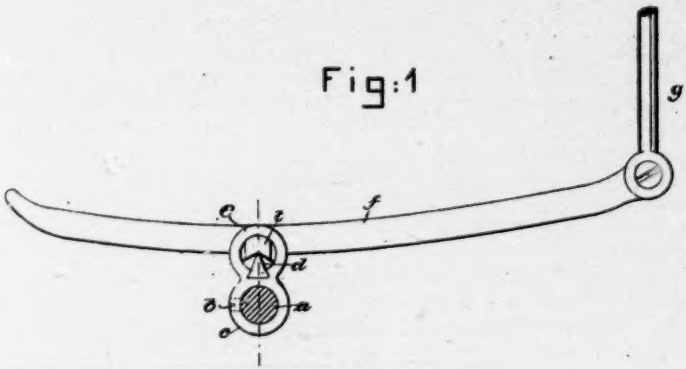
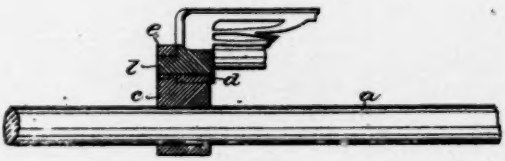


Fig: 2.



Witnesses.
John F. C. Steinbach
Bennie J. Noyes.

Inventor.
George W. Gregory

The treadle *f*, having the usual rod or link to be connected with the crank-pin of the usual driving-wheel of the sewing-machine stand or table, has upon each side edge a projecting ear, *l*, the under side of which is provided with a Λ-shaped recess to rest upon the bearing *d*, while the upper side of the ear *l* is rounded to fit the inner circular portion of the cap *e*, the latter, once upon the ear *l*, preventing it from being lifted from the said bearing *d*. The collars *c*, once fitted securely to rod *a*, and the ears *l* of the treadle placed on the bearings *d* under the caps *e*, will support the treadle properly, and as the opposite sides of the treadle in practice act against the inner face of one of the caps, as shown in Fig. 2, the treadle, it is obvious, cannot move laterally.

I am aware that sewing-machine treadles have had V-shaped bearings, as in United States patents No. 148,759 and 106,242; but neither of the said patents shows a bearing constructed in accordance with my invention.

I claim—

1. The collars *c*, provided with the V-shaped bearings and caps combined with a treadle having ears recessed or adapted at their under sides to rest on the V-shaped bearings, and rounded at their upper sides to be held down by the caps, substantially as described.

2. The rod *a*, the collars *c*, adjustably secured thereto and provided with V-shaped bearings *d*, and covering-caps *e*, combined with the treadle having ears *l*, recessed to rest on the bearings *d*, and rounded at their upper sides to be held down by the said caps, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEO. W. GREGORY.

Witnesses:
JOS. P. LIVERMORE.
B. J. NOYES.

395 Afternoon session.

APRIL 5TH, 1900.

Mr. KALLOCH: The next exhibit which was introduced at the taking of this deposition and testimony of Mr. Brevoort was "U. S. letters patent granted Charles H. Willcox, dated August 9, 1870, No. 106,242, for an improvement in sewing-machine tables."

(The patent referred to was here read to the jury, the following being a copy of the specification and drawings:)

396a UNITED STATES PATENT OFFICE.

CHARLES H. WILLCOX, of New York, assignor to Willcox & Gibbs Sewing Machine Company, of New York, N. Y.

Improvement in Sewing-machine Tables.

Specification forming part of Letters Patent No. 106,242, dated August 9, 1870.

To all whom it may concern:

Be it known that I, Charles H. Willcox, of the city, county, and State of New York, have invented a new and useful improvement in sewing-machine tables, of which the following is a specification.

My invention consists in a novel combination and arrangement of parts with the treadle of a table for sewing and other light machinery, its object being to greatly facilitate the operation of the machine by reducing the friction of the working parts of the treadle.

(Here follows diagram marked p. 396.)

In the drawings, figure 1 is a side elevation of a sewing-machine table constructed after the plan of my invention. Fig. 2 is a vertical section through the line *x y*, Fig. 1.

The bar B, to which the treadle C is secured, and upon which it rocks as an axis, is formed at each end into a triangular knife-edge projection, *b*, of suitable size to fit the V-shaped bearings *a* in the lower part of the side frames, A, and the bar is prevented from having any undue lateral movement by the washers upon the ends of the tie-rod *c*, which holds the lower part of the frame together.

The ends of the bar B are beveled off, as shown in Fig. 2, in order to reduce the bearing-surface of the ends against the frame, and bring the bearings as near as possible to the center of motion, and thus reduce the friction of the parts. The only working parts in contact being the lower edge of the knife-edge *b* and the angular seat in the bearing *a*, the friction between them is very slight, so that there is little or no necessity to lubricate the same.

The V-shaped seat of the bearings *a* may be formed of a separate piece of hard metal let into a groove in the frame, or otherwise applied to it, and the ends *b* may be formed also of a piece of hard metal, so that the wear of the parts in contact will be very slight, and all rattling or loose jarring motions entirely prevented.

What I claim as my invention is—

The rock-shaft B, beveled at the ends, and provided with V-shaped bearings *b*, extending to the center of motion of the rock-shaft B, and supported in a V-shaped bearing-seat, *a*, in combination with a

C. H. Wilcox,

Treadle.

NO. 106,242. Patented Aug. 9. 1870.

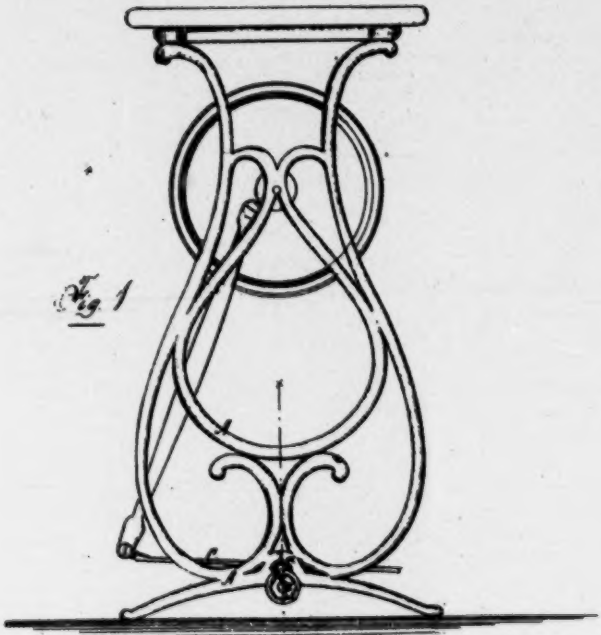


Fig. 1

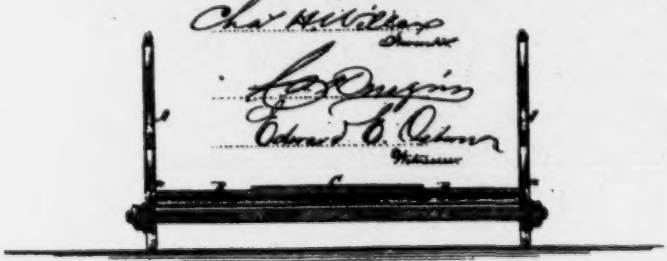
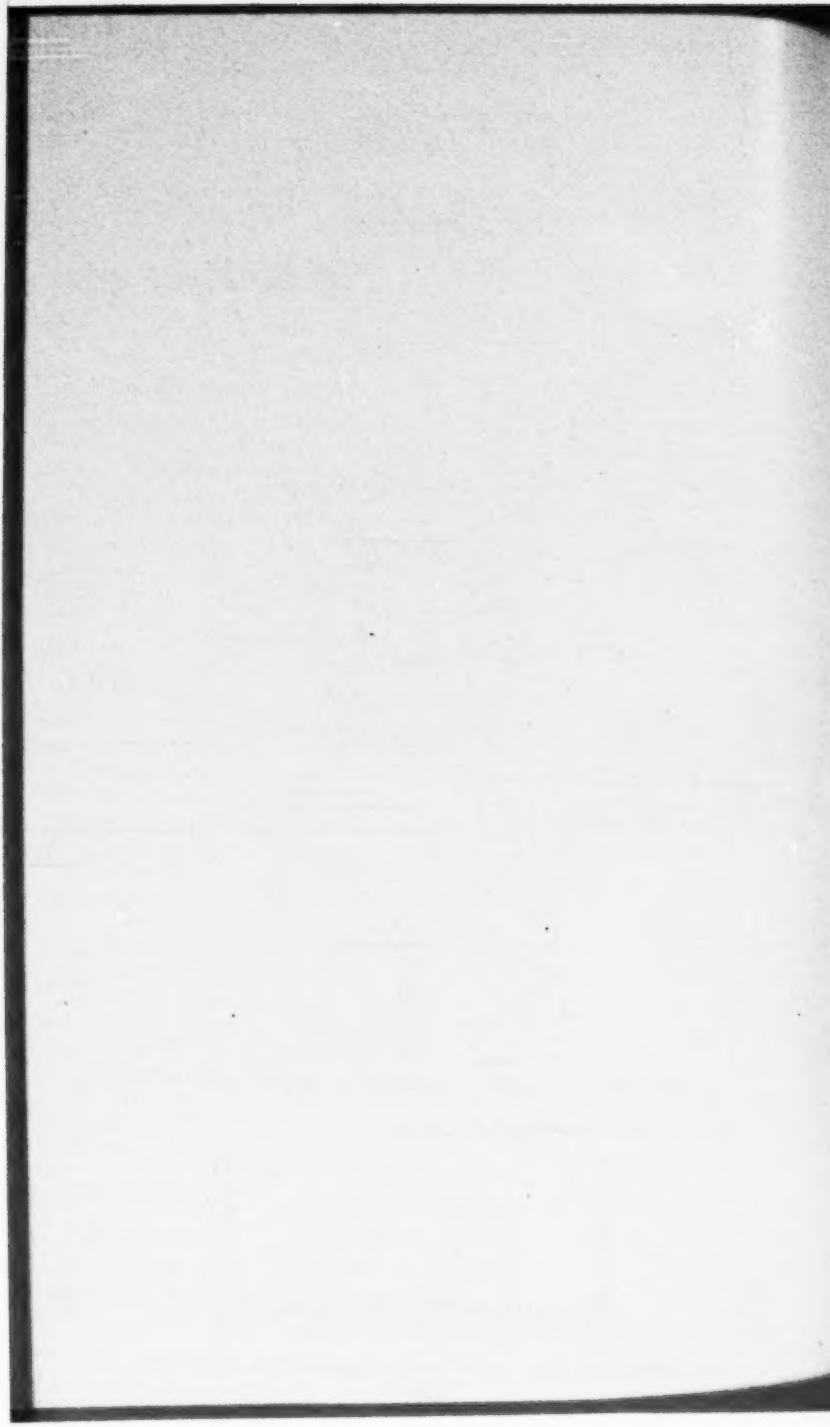


Fig. 2



treadle movement, substantially as and for the purposes set forth and specified.

CHAS. H. WILLCOX.

Witnesses:
C. A. DURGIN,
EDWARD E. OSBORN.

397 Mr. KALLOCH: Then there was also introduced at the taking of this deposition "U. S. letters patent granted John D. Lawlor, dated February 7th, 1882, No. 253,212, for an improvement in treadles for sewing machines."

(The patent referred to was here read to the jury, the following being a copy of the specification and drawings thereof:)

398*a*

UNITED STATES PATENT OFFICE.

JOHN D. LAWLOR, of Montreal, Quebec, Canada.

Treadle for Sewing Machines.

Specification forming part of Letters Patent No. 253,212, dated February 7, 1882. Application filed December 20, 1881. (No model.)

To all whom it may concern:

Be it known that I, John D. Lawlor, of Montreal, in the province of Quebec and Dominion of Canada, have invented certain new and useful improvements in band-wheels and treadles for sewing-machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

(Here follows diagram marked p. 398.)

Figure 1 is a vertical sectional view of the band-wheel, taken through its axle; and Fig. 2 is a similar view of the treadle.

Similar letters of reference indicate corresponding parts in both figures.

This invention relates to the axles or spindles for the band-wheels and treadles of sewing-machines and similar light machinery; and it consists in certain improvements in the construction of the same, having for their object to insure light running and to facilitate the taking up of slack caused by wear upon the spindles, as will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings hereto annexed, A represents one side of the table-frame of a sewing-machine, which is provided with a suitably-constructed bracket, B, having a conical box or bearing, C, for the band-wheel spindle D. The latter is provided with an end, E, of reduced diameter, which projects from the conical shoulder or bearing F, through the box C, and carries the band-wheel G, which may be keyed or otherwise secured upon the end E of the spindle. The rear end of the spindle has a conical recess, H, to receive the correspondingly-shaped point I of a screw, J, inserted from the outside through a suitable threaded opening in the frame A, on the outer side of which it is provided with a jam-nut, K, to retain it securely in the position to which it may be adjusted. The bearings of the spindle, it will be observed, are formed by the shoulder F in box C and by the recess H on point I of nut J. Should the bearings become worn, so as to cause the wheel to run unevenly or unsteadily, the defect may at once be remedied by tightening the screw J. If,

1934

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(No Model.)

J. D. LAWLOR.

TREADLE FOR SEWING MACHINES.

No. 253,212 Patented Feb. 7, 1862.

Fig. 1.

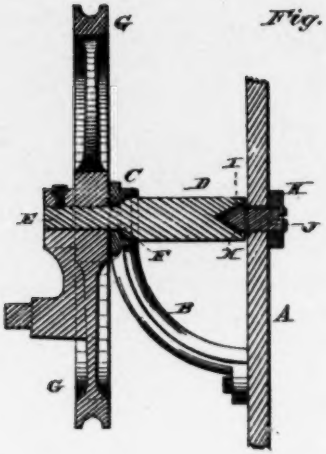
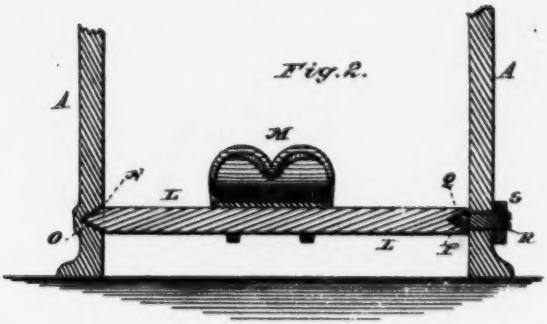


Fig. 2.



WITNESSES

Fred. L. Dieterich.

P. C. Dieterich.

INVENTOR

John D. Lawlor.

by C. A. Snow & Co. Attorneys

on the other hand, the wheel should run too hard, the screw J may be loosened, and it will then be found to run freely.

The axle L of the treadle M is provided at one end with a conical point, N, having its bearing in a recess, O, in one side of the table-frame. The other end of axle L is provided with a conical recess, P, to receive the correspondingly-shaped point Q of a screw, R, adjusted in the other side of the table-frame, and equipped with a jam-nut, S. By loosening or tightening the screw R the bearings of the axle may be loosened or tightened as required.

From the foregoing description, taken in connection with the drawings hereto annexed, the advantages and operation of my invention will be readily understood. It is simple, convenient, and easily adjusted.

I do not broadly claim a conical or compensating journal-bearing, as I am well aware that such is old and well known; but,

Having thus described my invention, I claim and desire to secure by letters patent of the United States—

The combination, with a suitable frame, of a shaft having at one end a conical point or shoulder fitting in a bearing in said frame, and at its other end a conical recess to receive a conical-pointed screw adjustable in said frame, a jam-nut adjustable upon said set-screw, and a band-wheel or treadle rigidly mounted upon said shaft, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN DENNIS LAWLOR.

Witnesses:
F. FITZPATRICK.
W. E. JUDGER.

399 Mr. KALLOCH: Those are all the copies of letters patent that were introduced at the taking of this deposition. The deposition then proceeds primarily, "Defendant's counsel also offers in evidence the following exhibits: Model of Cramer patent in suit, and requests that the same may be marked, 'Defendant's Exhibit Cramer Patent Treadle and Brace.'"

(The model referred to was here introduced in evidence as marked.)

Mr. KALLOCH: "Defendant's counsel also offers in evidence model of the treadle devices of said English letters patent to Jules Bourdin, of June 27, 1874, No. 2,232."

(The model referred to was here introduced in evidence as marked.)

Mr. KALLOCH: "Defendant's counsel here offers in evidence sewing-machine stand brace, cross-bar, and treadle, and requests that the same may be marked, 'Defendant's Exhibit Illustrated Stand, Brace, Cross-bar, and Treadle No. 1.'" This was also introduced in the Fry case, and was marked as an exhibit in that case.

The COURT: What does that represent?

Mr. KALLOCH: It represents the Diehl patent.

Mr. OFFIELD: The same identical model that was in the Fry case and the case tried by Judge Beatty, as Exhibit "B."

(The stand referred to was here introduced in evidence as marked.)

Mr. KALLOCH: "Defendant's counsel also offers in evidence sewing-machine stand, brace, cross-bar, and treadle, and re-
400 quests that the same may be marked, 'Defendant's Exhibit, Illustrated Stand, Brace, Cross-bar, and Treadle No. 2.'"

(The stand referred to was here introduced in evidence as marked.)

Then commences the testimony of Mr. Brevoort, as he was examined by Mr. Offield, the testimony being taken for use in the case of Cramer *vs.* Fry. This is the deposition introduced in that case, and marked as an exhibit in that case:

"And thereupon defendants call as a witness in *his* behalf Mr. HENRY L. BREVOORT, who being first duly sworn to state the truth, the whole truth, and nothing but the truth, deposes as follows in answer to interrogatories propounded by Charles K. Offield:

"Q. 1. Please state your name, age, residence and occupation?

"A. My name is Henry L. Brevoort, I am forty-five years old, I reside in Brooklyn, New York, and I am by profession an engineer.

"Q. 2. Please state somewhat in detail what experience you have had, either practical or theoretical, which enables you to compare and understand different mechanical devices, either in the same or analogous industries, and by such comparison point out the similarities and differences between such devices and the principles of their construction and operation, and generally what experience you have had, and how frequently you have been called upon to testify as a mechanical expert witness in patent causes relating to letters patent and inventions in the different Federal courts of the country.

401 "A. I learned the trade of a machinist when I was a boy, and for some years I owned and operated a machine shop in the city of New York. About twenty years ago I began to devote my attention to patents and patent devices, and from that time to this I have been almost exclusively occupied in examining patents and mechanisms for the purpose of testifying as an expert mechanic in relation thereto. I have been called upon to testify in about six hundred different patent suits in the circuit court of the United States for most all the different circuits. About sixteen or seventeen years ago, I first became professionally acquainted with sewing machines in litigations then pending, and from that time to this I have been constantly engaged in sewing-machine litigation of some kind. I have been employed by the Domestic Sewing Machine Company, the Willcox & Gibbs Company, the New Home Company, the Manufacturers Special Machine Company, the Singer Company, and others. I have examined many hundreds of patents of sewing machines and have participated as an inventor in patents relating to sewing-machine attachments. I am at present engaged in, I think, four cases, relating to sewing-machine mechanism.

"Q. 3. Have you during that time been employed also as a mechanical expert and to testify in patent causes in the Federal courts against as well as for the principal companies above named by you?

"A. Yes, I have acted for various companies named and against, I think, pretty nearly all of them, except perhaps the Domestic.

402 "Q. 4. Have you examined, so that you understand the same and the practical construction and operation of the device therein shown and described—'Defendant's Exhibit Cramer Patent with its File-wrapper and Contents,' *which we will hereafter* call for convenience the Cramer patent?

"A. I have examined it. I understand what the patent describes, and I also have examined the file-wrapper of the said patent.

"Q. 5. Have you also examined, so that you understand the same fully, and the devices therein shown and described, the various letters patent, both English and United States, offered in evidence as exhibits in this case?

"A. I have, and understand what they show and describe.

"Q. 6. Please examine 'Defendant's Exhibit Cramer Patent, Treadle and Brace,' and state what it represents and under whose direction it was made?

"A. It represents the exact device of the Cramer patent, and it was made under my direction, and from drawings which were prepared by my office, direct from the said Cramer patent. It shows the patented structure enlarged eight times, thus making a frame of full size. The actual frame is made to the scale of the patent, and I refer to figure 1.

"Q. 7. Please examine 'Defendant's Exhibit Model Bourdin, 1874, English Patent,' and state what such model represents and under whose direction it was completed?

"A. I have examined the exhibit; it represents the machine
403 shown in the English patent of Bourdin No. 2232. The model was completed under my direction, and is an accurate and correct copy of that which is shown in the said English patent and described therein.

"Q. 8. Have you examined also so that you understand the same their construction and operation—the two exhibits marked 'Defendant's — Illustrated Stand, Brace, Cross-bar and Treadle No. 1,' and 'Defendant's Exhibit Illustrated Stand, Brace, Cross-bar and Treadle No. 2'?

"A. I have examined both of these and I understand their structure and mode of operation.

"Q. 9. Please state what you understand to be the alleged invention of combinations and devices of this Cramer patent in suit of January 30th, 1883, No. 271,426, as especially as recited and identified by the two claims of said patent?

"A. The mechanism described and shown in the patent is of somewhat peculiar construction. The two side legs of a sewing machine are shown at E E. The cross-brace is shown at C, and D represents a cross-bar which it is said unites the legs at the lower part, though no bolts or uniting means are shown in the drawing. The lower portion of the cross-brace is provided on each side with loops or

openings within which the trunnions of the treadle oscillate, the trunnions being held in their proper position in the loops by a filling block of wood and leather marked F *f*. The parts are clearly shown in figure 2, so far as the loop, trunnion, and wood and other filling block is concerned. The patent has two claims. The first one relates to the vertical double brace joining the legs of the two ends of a sewing machine. That is, it includes the two legs
404 E E, and the cross-brace C. The claim also says that the brace is provided with holes through its lower extremity to *serve as bearings*, in combination with the treadle provided with trunnions fitted to oscillate in the said bearings.

"Q. 10. Please compare in your own order and in your own way the Cramer patent in suit with the several letters patent, exhibits offered in evidence in behalf of defendant, and state how, to what extent, if at all, you find the alleged invention, combinations, and devices of this Cramer patent to be contained in said exhibits respectively, and give your reasons in this fully for any opinion you may express, or statements you may make.

"A. The Wilcox patent, No. 106,242, and the Gregory patent, No. 256,563, both show that it was old to mount sewing-machine treadles with the trunnion of the treadle entering a bearing at each side. the bearing being of the same character as the bearings of Cramer, to wit, knife-edged or scale-beam bearings. But the Wilcox patent shows the trunnions mounted, not in a vertical brace, but in the openings formed in the legs of the machine, while the Gregory patent shows the trunnions of the treadle as mounted on the cross-brace or cross-bar which holds the legs together. The patent device of Donovan shows a treadle with trunnions having knife-edge bearings, and these are shown as mounted either in openings formed in the side legs, or on the shaft shown at K, which is the lower cross-brace of the machine. Thus it is shown to be old before the date of the Creamer patent to mount the treadle, or rather the trunnions of the treadle, either in openings in the legs
405 or in openings or bearings formed in the cross-brace, the bearings being of the same character as those of Cramer. And therefore the only possible novelty in the Cramer patent is the mounting of the trunnions of the treadle in the vertical brace. But when the English patent of Bourdin is examined, it will be found that the said patent shows a structure in which there are the two legs of a sewing-machine table, the table itself, and a vertical brace fastened at the lower portion to the legs of a sewing machine and at the top to the table, and this brace at the lower portion carries the bearings, on which the treadles for the two are shown, vibrate or operate. I do not contend that any of the old patents show Cramer wooden block F and his leather cushion F, but the patents do show that his form of bearing was old. They show that it was old to mount a treadle with this form of bearings, either in the legs of a sewing machine or in a cross-brace, and the English patent shows that it was old to mount the treadle with the bearing rod which carries the treadle mounted in the vertical double brace which unites the legs of the sewing machine at or near the bottom, and which, as

the Cramer patent says, unites either the upper portion of the legs or it is connected 'to the table of the machine near the legs,' which is the structure adopted in English patent. I also refer to the patent of Lawlor, 253,212, which shows the treadle of a sewing machine mounted on what are commonly called centers or set-screw bearings, the bearings themselves being carried by the legs of the machine. Before Cramer, the legs, the cross-brace, and the vertical double brace, had all been used as supporters for the treadles
406 *in sewing-machine* mechanism. I call attention to the model 'Defendant's Exhibit Model Bourdin 1874 English Patent,' as showing the structure wherein the treadles are supported in the vertical double cross-brace.

"Q. 11. Will you now compare carefully 'Defendant's Exhibit Illustrated Stand, Brace-bar, and Treadle No. 1,' with the Cramer patent in suit, and state whether or not the alleged invention, combinations, and devices of the said Cramer patent, or either two claims, are found contained, or suggested in this Exhibit No. 1, and give your reason for your statement?

"A. I will do so. And I will begin by describing the exhibit marked No. 1 and referred to in the question. This exhibit is a sewing-machine frame with two legs and a vertical cross-brace, and at the bottom of the legs the parts are united by a bent portion of the casting forming the cross-brace. The bent portion is, however, really the lower cross brace or bar of the machine, and performs the function of the bar D in the Cramer patent. *The bent portion is, however, really the lower cross-brace or bar of the machine, and performs the function of the bar D in the Cramer patent.* In the vertical portions of this cross-brace, one on each side, are two set-screws or center bearings which, when in position and properly adjusted, remain fixed in the machine. The treadle, instead of having trunnions in it, has two depressions into which the points of the set-screws go, and thus, when the treadle is operated, the treadle in its oscillation turns upon the points of the stationery set-screw. It would be practically the same thing were the set-screws changed and a
407 stationary rod were passed from side to side through a hole across the treadle. Comparing this device with the Cramer patent, it will be seen that the treadle is really mounted in that which is substantially the cross-brace of the machine and not the vertical brace, though the casting together of the parts leaves certain portions common to both. The machine No. 1 has no holes through the lower extremity of the vertical double brace which serve as bearings and it has no treadle which is provided with trunnions which are fitted to oscillate in the bearings. The treadle in the machine No. 1 has two depressions in it, and there is nothing in the said machine, as in Cramer's, which oscillates when the treadle is worked, in openings or bearings provided in the vertical double brace. The machine No. 1 has no knife-edged bearings, it has no blocks of wood *f*, no leather cushion F, or, in fact, any of the details shown by Cramer. The defendant's structure is the same as that of the English patent to Bourdin, with the rod on which Bourdin's treadles turn shortened into center bearings as shown in the

Lawlor patent at Q, both methods being known equivalents for mounting sewing-machine treadles. The treadle is really hung in the lower cross-brace. There are no bearings in this brace in which any portion of the treadle oscillates. The treadle has no trunnions which enter openings in the vertical double brace and oscillate therein. There are no knife-edged bearings, no block of wood, and no cushions. The machine No. 1 and the Bourdin machine have no part or parts adapted to oscillate in any opening formed in the vertical cross-brace, as in Cramer's; also in the machine No. 1,
408 the bearings which carry the treadles when the machine is in operation are fixed and stationary in the cross-brace, and the treadle oscillates upon such fixed bearings. This is also true of the Bourdin machine; the bearings on which the treadles operate are fixed, not in the cross-brace, but, like Cramer, in the vertical double brace, and the treadles operate about and around such fixed bearings. I have said that in machine No. 1, the vertical double brace and the cross-bar or brace were at certain points common one to the other, one merging into the other—the treadle being carried by that portion which is most properly defined as the cross-brace as distinguished from the vertical double brace; while in the Cramer patent the treadle hung directly in openings formed in the vertical double brace. The patent, however, speaks of the vertical double brace C as common, that is, as I understand it, common to both legs, and it also speaks of the cross-brace or bar D as common to the two sides of the machine. It will be observed that the cross-bar D passes through openings or holes in the vertical brace, and they are common to one another, or practically merge one into the other at such points. In this regard, it is to be noted that the brace in Cramer has nothing to do with the treadle, while the cross-brace in machine No. 1 carries the treadle.

"Q. 12. State whether or not there is any provision in the Cramer patent for the bearings and holes of that patent as identified from the first claim, of being in any other form and shape than the sharpened edge or knife-bearings shown and described, and the long vertical loop-holes also shown and described in that patent.

409 "A. There is nothing else in the patent which is descriptive of modification or changes in the parts named; the parts that are shown in the drawing being described in the specification, and no modified or different parts being either shown or described.

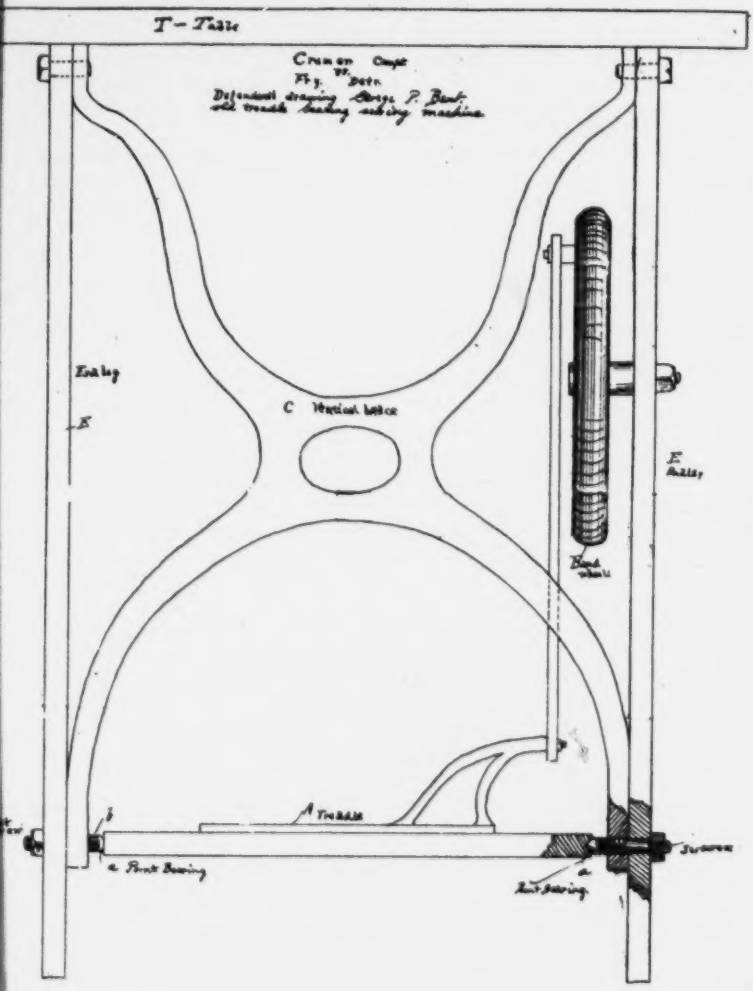
"Q. 13. What do you understand Cramer to mean when he says that he is 'aware that sewing-machine treadles have before been provided with V-shaped bearings, and I do not claim the same as my invention'?

"A. I understand by his language he referred to some of the older patents to which I have referred, which shows these bearings.

"Q. 15. Do you find the cones and set-screw disclaimed by Cramer in his file-wrapper and contents present in the treadle bearings of machine No. 1?

"A. In machine No. 1, the treadle is carried by set-screws and cones.

"Q. 16. I see the model exhibit of the Bourdin English patent


T-Table
Cranon Cage
Fig. VI. Detail drawing Geo. P. Bent.
Detail drawing showing cutting machine
Leading
K
C Vertical Lever
E
Band wheel
A Treadle
a Front Bearing
a
Rear Bearing
Screw

shows screws holding the treadle bearings in place. Do you find such screws exhibited in the English patent?

"A. I have carefully examined the drawings of the English patent, and I determined that the drawings represented screws at the end of the treadle shaft, and I had screws put onto said model. Also, in making the model of the Cramer patent, I supplied the screws at the end of cross-brace D, which screws are referred
410 to but not shown in the drawings of the Cramer patent. The model I refer to is 'Defendant's Exhibit Cramer Patent Treadle.'

"Q. 17. In view of the old patents on treadle bearings for sewing machines, did Cramer exhibit either ordinary mechanical skill in organizing his V-shaped bearings resting in the long vertical loops in the lower end of his double vertical brace, in your opening?

"A. I do not think he exercised any mechanical skill whatsoever. The bearing he has devised is an exceedingly clumsy form of bearing. It is unhandy, because to take it out probably both of the legs of the sewing machine would have to be removed—and when I say 'it,' I refer to the treadle and the trunnions. A treadle which could not be removed from the frame of a sewing machine without taking that frame apart would be an exceedingly poor treadle, and would show but little mechanical skill on the part of the person who devised the same.

"Q. 18. In view of the old patents offered in evidence here, would any person, even the most ordinary unskilled mechanic, exhibit anything more than the most ordinary mechanical skill, if he hung the treadle bar in the lower end of the vertical double brace of machine No. 2, instead of at a point adjacent to said lower end of the brace, if for any reason he desired so to do?

"A. The mechanic acquainted with the earlier art as shown
411 by the patents here in evidence, would not have to exert any skill in relocating the treadle bearing, because he would see from the earlier art that the treadle had been supported by the legs, by the cross-brace or bar, and by the vertical cross-brace, consequently to locate it in any one of those three positions would merely be copying from some one of the earlier patents, and this would neither require invention or skill. Therefore it would require nothing but the ability of a workman to relocate the treadle support of machine No. 2 in the vertical cross-brace instead of in the leg.

"Defendant's counsel here offers in evidence a drawing of sewing-machine treadle bearings, vertical brace, and stand, and requests that the same may be marked 'Defendant's Exhibit Drawing George P. Bent Old Treadle-bearing Sewing Machine.'"

(The drawing referred to was here shown to the jury, the following being a photographic copy thereof:)

(Here follows photograph marked p. 412.)

413 "Q. 19. Have you examined this last drawing exhibit so that you understand the same and the practical construction and operation of the sewing-machine treadle-bearing brace device therein shown?

"A. Yes, to all branches of the question.

"Q. 20. Will you letter the different parts shown in this drawing, so as to show by letter and name their purpose and use?

"A. I have done so.

"Q. 21. Please compare this drawing, and state to what extent such drawing contains any alleged invention of the Cramer patent in suit, as identified by the first claim of that patent, and what relation the devices of that patent bear to machine No. 1.

"A. I have lettered the parts, and have also written their names upon them, so that it will be unnecessary to describe them in the testimony. In the machine shown in the drawing, the vertical brace marked C is taken, when separated from the legs, the set-screws are put into it, they are adjusted to the point bearing at each end of the treadle shaft A, and then the end legs are slipped over the reduced portions of the set-screws, and a nut is put on. This allows wear to be compensated for, and the reduced portion of the set-screw and the nut tend to hold the vertical brace and the end legs together.

"Cross-examination of HENRY L. BREVOORT:

"X Q. 1. Your principal business for a number of years past has been the preparation for and the giving of expert evidence in litigated patent causes, has it not?

"A. It has.

414 "X Q. 2. Such work requires considerable time spent on the individual cases, I presume?

"A. Practice reduces the amount of time required, and also familiarity with the subject-matter; some cases take more time than others. I was in one case where it took me three days to read the patent.

"X Q. 3. And you say what is about the average time required for preparation for and giving evidence in such cases?

"A. I took the average time once that five hundred cases would take and if I do not mistake my recollection, I think they averaged between ten and fourteen days; I have forgotten the exact figures.

"X Q. 4. You have been employed in about six hundred cases within the last twenty years, that was at the rate then of some thirty a year?

"A. About that; some years more and some years less.

"X Q. 5. Now then, if the cases were taken on the average of from ten to fourteen days, it would be that practically your whole time for twenty years has been spent in preparing for and giving of evidence?

"A. That is so; barring vacations and such like holidays.

"X Q. 6. Does your statement as — your occupation as an engineer

imply that you have been employed any in the last twenty years in devising or superintending the construction of structures requiring engineering ability?

"A. Yes, I am doing that sort of work almost constantly.

415 I am engaged now in devising a number of structures which are to be used either for the purpose of illustration in litigation or for the purpose of showing operations of parts, relative arrangement of parts and for various purposes.

"X Q. 7. For use in patent causes?

"A. Principally.

"X Q. 8. You excepted the Domestic Company as a company which you had appeared for and not against. Have you not appeared against them too?

"A. I may have. I have, however, no recollection of doing so. The cross-examining counsel reminded me of a recent case about a typewriter where it appears the Domestic Sewing Machine Company was backing up a man named Williams. I did not know the fact, and I was confining my answer to sewing-machine matters.

"X Q. 9. What element does the term bolt imply in mechanical structures?

"A. It implies ordinarily a threaded stem with a head on one end of it, such a structure as would be adapted to receive a nut on the threaded portion.

"X Q. 10. What would you understand to be the structure implied by the language of lines 44 and 45 of the Cramer patent specification—'I make the two ends of the common cross-bar D serve as these bolts'?

"A. I should understand that the cross-bar was, at each end, to be turned down, have a thread cut upon it, and that then nuts should be put on on the outside of the two legs, the turned-down portions passed through holes in the legs.

"X Q. 11. That would be the ordinary mechanical signification of that language?

416 "A. I think it would be.

"X Q. 12. What is a trunnion?

"A. A trunnion is usually a projection from some body which is to oscillate, and the trunnion is usually the portion of the oscillating body which is supported in the bearings which carry and support the said body like the trunnions of a cannon, or the trunnions of an oscillating engine.

"X Q. 13. You would call the supporting projections from the ends of a treadle of the Cramer patent trunnions, would you?

"A. They can be so called, and are so called in the patent. I do not admire the choice of the word as descriptive of the bearings, but it expresses clearly enough what is meant.

"X Q. 14. Is there any difference mechanically between such a trunnion and a trunnion screw such as is employed in 'Defendant's Exhibit Illustrated Stand, Brace, Cross-bar and Treadle, No. 1'? I mean, can the two devices be and are they commonly used as equivalents?

"A. Both forms of device are old, so that one may be said to be

in a sense a known substitute for the other, but they have different capacities and different modes of use; a pointed set-screw acting as a bearing allows of lateral adjustment and also holds the body that rotates against it from all motion, except rotation. A bearing such as is shown in the Cramer patent has no means for lateral adjustment, and something has to be supplemented to keep what Cramer calls a trunnion from rising from its seat. The idea is that
417 less friction, I suppose, would be found in Cramer's device than in a device using pointed set-screws. Mechanically speaking, the set-screw is the best device.

"X Q. 15. There is really no need of means for lateral adjustment is there, on a trunnion which has a sufficiently elongated bearing to prevent the possibility of the dislodgment of the trunnion from its bearing?

"A. It would be highly advantageous to have something in the Cramer structure to take up the wear of the part. As soon as the shaft and treadle marked A in the Cramer device got loose endwise, the shaft would begin to make a noise which could not be remedied without taking the frame practically to pieces. In the form adopted in machine No. 1 a mere turn of the screw will keep the treadle tight after any amount of wear.

"X Q. 16. Are the trunnions and the trunnion screw alike and equivalent in this, that they oppose no resistance to the spreading apart of their supporting bearings?

"A. I do not want to be captious as to the use of the language but I must enter my objection to calling a pointed set-screw a trunnion screw; such a name has never, within my experience, been applied to such a device. It is true that with a device like Cramer's, where a shaft is merely supported in end bearings, that the said shaft does not act as a tie-rod. It is also true that pointed set-screw bearings do not act as tie-rods to keep the parts from spreading.

"X Q. 17. So that with either Cramer's treadle support or the treadle support of machine No. 1, separation of the end legs or frames of the stand would cause the treadle to fall, and the
418 treadle would offer no resistance to such spreading?

"A. Providing the cross-brace was broken, and the legs were spread apart, the treadle would fall out of the frame of the machine and out of machine No. 1. Of course, such an operation could never take place except intentionally in a sewing machine. The difference between machine No. 1, and the Cramer device, in this regard, is that by loosening the pointed set-screw on one side of the treadle, or on both, if desired, the treadle can be taken out for repairs or the like, whereas with the Cramer device to get the treadle out, the frame must be taken practically to pieces.

"X Q. 18. Does any patent structure earlier than the Cramer patent, and referred to by you in your direct examination and properly in evidence herein, show a structure in which the end frames or legs of the stand are rigidly united by a cross-brace and the treadle supports or trunnions are supported in the vertical brace independently of the cross-bar?

"A. I do not know that any other structure here present, other than the Cramer patent and model, does show such a structure. In the machine No. 1 the treadle is practically hung in the cross-brace, and it cannot be said to be supported by the vertical double brace, although a portion of the cross-brace and a portion of the vertical brace are common to one another.

"X Q. 19. Do you think that a fundamental difference in structure is created by placing the supports of the treadle on machine No. 1 on a rigid part projecting below the point of attach-
419 ment of the vertical brace to the end legs of the stand instead of placing them in the vertical brace above the point of attachment of the latter to said legs?

"A. Taking the difference that the question points out between machine No. 1 and the Cramer, and also the differences that I pointed out as to the difference in the bearings and the arrangements of parts, I cannot well imagine anything more fundamental than the differences between Cramer's device and the machine No. 1. I answer this question with the devices as I find them, no other devices being applicable to the question. Yes, I think a fundamental difference does arise by reason of this change in the structure and location of the parts. One structure would not teach a mechanic how to build the other structure.

"X Q. 21. And you think that a mechanic who is worthy of the name who had seen a machine like machine No. 1 with the treadle supporting the screws in the vertical brace immediately above or at the point of attachment of the latter to the legs of the frame, could not, without invention, have shifted those screws three or four inches farther downward and put them into the same rigid structure near its lower end?

"A. The mechanic might have done what the question suggests, but no such situation is presented here, because no mechanic after having seen the Cramer device would be informed how such a device could be possibly applied to the bent rigid bar forming the treadle support of machine No. 1, and as a matter of fact the
420 Cramer device could not be applied to that structure without certain changes that would take it out of the Cramer patent.

"X Q. 22. Does any patent referred to by you antedating Cramer's patent and here properly in evidence, show a structure in which the end legs are united by a vertical brace in which the trunnions or other treadle supports have such bearings or support as not to prevent the spreading apart of the bearings?

"A. I do not know if I exactly understand the question. The Cramer device has bearings and a treadle mechanism which can exert no spreading-apart action on the legs or brace. The machine No. 1 has got such bearing supports and treadle mechanism as to cause a continual spreading-apart tendency on the part of the legs. The old English machine illustrated by the model has the cross-piece on which the treadle turns supported by the brace, and in such a way as to resist the spreading apart of the brace or legs. The only pressure when the machine is operated in the case of the

Cramer device and the old English device is the downward pressure at the bearings, whereas, in the machine No. 1 the pressure is downward and outward.

"X Q. 23. Does any structure to which you have referred antedating Cramer's patent, show a treadle supported on a vertical brace at its ends in such manner as not to resist the spreading apart of its supports?

"A. The only patent in evidence showing the treadle carried in the cross-frame or vertical frame before Cramer is the English patent of which there is a model. My best judgment of this is
421 that the rod on which the treadles are should have screws on their ends. This would prevent the frame from spreading apart. I do not think there is any device in evidence in which the journals are merely downwardly acting journals without any spreading-apart tendency and mounted in the vertical brace. In the English device, or the device of the English patent, the journals are like Cramer's, and no spreading-apart tendency is had. I do not know that any machine comes within the meaning of the question. All of the earlier patents, for example, Donovan and Wilcox, show bearings like Cramer's, and they would not resist the spreading apart of the legs, but these bearings are in the legs and not in the vertical frame. A mechanic can place them in the vertical frame if he wants to, as it is old to support treadles in vertical frames.

"X Q. 25. Do you think it would be the same essential structure if instead of the bearing screws of the treadle in machine No. 1 a rod was run straight across supporting both ends of the treadle, do you?

"A. For example: If the bearing screws were prolonged through an opening supposed to be made across the treadle the structure would not differ except in that it would lose its feature or capacity of taking up any wear that there might be.

"X Q. 26. And this, whether the rod turned with the treadle or the treadle turned on it?

"A. If the treadle turned with the rod, then some different form of bearing entirely would have to be provided than is now in machine No. 1. But, if the treadle turned on the rod, then such a
422 support as the holes furnished for the set-screws would support the rod. It is impossible to pass on the materiality of the supposed changes without having some standard to go by.

"X Q. 27. Suppose we adopt the standard that you had in mind, if you had one, when you said that these two structures would be the same, would it make any difference whether the rod turned in the supports on what you call the cross-bar of machine No. 1, or the treadles turned on the bar?

"A. The structures which are now described differ in their relation to machine No. 1 in that one, to wit, the structure which supposes a stationary rod could be inserted and utilized in the machine No. 1 by making a suitable hole through that treadle, or one thick enough to admit of the hole being made, whereas, if the treadle had trunnions on it as in Cramer, it never could be gotten into the

cross-brace of the machine No. 1 unless the machine was rebuilt and new parts were added.

"X Q. 28. Lawlor's patent has no cross-brace, has it?

"A. None is shown, and I do not think any is described.

"X Q. 29. And Wilcox has no vertical brace, has it?

"A. No.

"X Q. 30. The Gregory patent shows neither of these, does it?

"A. Gregory shows a cross-brace, and the bearings of the treadle are mounted on the cross-brace."

Mr. KALLOCH: We next produce, if your honor please, the depositions of George P. Bent, Susan Dilworth, William H.
423 Matchett, Walter Scates, Frank B. Davis, William Walmsley, and John T. Elliott. These depositions were also taken in the Fry case and were introduced in evidence in that case. They were opened and refiled on December 3, 1894, and endorsed as having been used in case No. 11,808, which is the Fry case.

"OCTOBER 30, 1894.

Present: Messrs. P. W. Snowhook and Mr. Ephraim Banning for complainant, and Messrs. Offield, Towle and Linthicum for defendant."

"GEORGE P. BENT.

"Q. 1. Please state your name, age, residence, and occupation.

"A. Name, George P. Bent; residence, 6948 Wentworth avenue; manufacturer of pianos and organs; jobber of sewing machines.

"Q. 2. For how long a time continuously have you been engaged in that business, and at what place or places?

"A. Since 1878 at Chicago, and from the years 1880 to 1885 at Kansas City.

"Q. 3. On your own account during those years?

"A. Yes, sir.

"Q. 4. Were you connected with the manufacture, use or sale of sewing machines in any way prior to the year 1878?

"A. Yes, sir; from the year 1870 with the house of David C. Cook, whom I succeeded in 1878.

"Q. 5. From 1870 to 1878 at Chicago?

"A. Yes, sir.

424 "Q. 6. What time in the year 1870 did you engage with Mr. Cook at Chicago in the sewing-machine business?

"A. May or June, and the business then was more in the way of sewing-machine supplies than of sewing machines themselves.

"Q. 7. How extensively were you personally engaged in the manufacture, use, and sale of sewing machines themselves, and their supplies, at Chicago, during the years 1880, 1881, and 1882?

"A. Sewing machines and their supplies occupied almost my entire attention during those years.

"Q. 8. What were the names or the title designations of the principal sewing machines manufactured and sold by you during the years 1880, 1881, and 1882?

"A. I bought the heads of the machines and to them added the

furniture and the stands, and sold the machines known as the Crown' the New York Singer Model machines, and the Peerless Singer Model machines.

"Q. 9. Have you present here the sewing machines, one each, identified by you as the Crown sewing machine and as the New York Singer Model?

"A. I have the stand of the Crown and the complete machine of the New York Singer Model.

"Defendant's counsel here offers in evidence the two machines identified by the witness, and requests that the same may be marked 'Defendant's Exhibit, George P. Bent, Old Vertical-brace, Treadle-bearing, Sewing Machine,' and 'Defendant's Exhibit, George P. Bent, Old Crown, Cross-brace, Treadle-bearing Sewing Machine.'"

425 (The machines referred to were here introduced in evidence as marked.)

"Q. 10. When, what year, I mean, did you first begin the manufacture, and sale of these two machines just offered in evidence?

"A. They were put upon the market in the winter of the years 1880 and 1881.

"Q. 11. State approximately how extensively you sold the machines marked 'Defendant's Exhibit George P. Bent Old Vertical-brace, Treadle-bearing Sewing Machine' during the year 1881?

"A. I cannot tell how many I sold, but hundreds of them were sold in that year.

"Q. 12. What satisfaction did they give, as practical operative sewing machines?

"A. Very good, I think, for they kept calling for more.

"Q. 13. In what parts of the country were these machines with the treadle hung in the brace, as shown by this exhibit, sold principally?

"A. Principally in territory naturally trading with Chicago, but they were sold, more or less, all over the country.

"Q. 14. During the year 1881, did you have any branch house selling these machines with the treadle hung or pivoted in the vertical double brace, as shown in this exhibit?

426 "A. I did, at Kansas City, Missouri.

"Q. 15. For how many years did you continue, after the year 1880, the manufacture, use, and sale of sewing machines with the treadle hung or pivoted in the double brace as shown in this exhibit before you?

"A. I have used this method of hanging the treadle either from the brace above or the cross-bar beneath the treadle, ever since the time that I first brought it out, in 1880–'81.

"Q. 16. For how many years did you hang the treadle or pivot it in the vertical brace exactly as shown in 'Defendant's Exhibit, Old Vertical-brace, Treadle-bearing Sewing Machine,' after the year 1880?

"A. I can't tell exactly, but should think for seven or eight years.

"Q. 17. I now call your attention to the 'Defendant's Exhibit, George P. Bent Old Crown Cross-brace, Treadle-bearing Sewing

U. S. Circuit Court, Ninth Circuit
Northern District of California

Herman Case

COMPACT

COMPLETE.

Willis B. Fry
v.

Defendant's Book and Counter

Buyer's Book and Catalogue

George P. Bent 1882 Catalogue

SEWING MACHINE

E. B. Sherman
U. S. Commissioner

NEEDLES, OILS.

ATTACHMENTS,

PARTS AND

SUPPLIES.

FROM

GEO. P. BENT

MANUFACTURER AND JOBBER,

CHICAGO, ILL.:
81 & 83 Jackson Street.

KANSAS CITY, MO.:
1304 St. Louis Avenue.

(KING BEE—that is—Gee Pee Bee.)

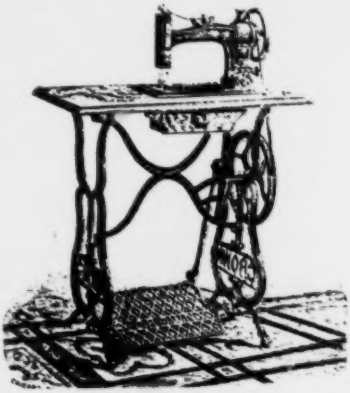
PROMPT ATTENTION TO ALL ORDERS AND LETTERS.

YOUR TRADE SOLICITED. SATISFACTION GUARANTEED.

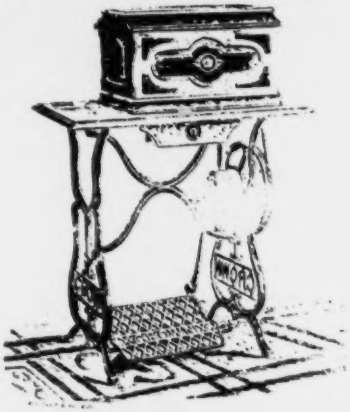
Oldaway Printing Co., 84 & 86 Franklin St., Chicago.

THE EASY-SELLING "CROWN" SEWING MACHINE.

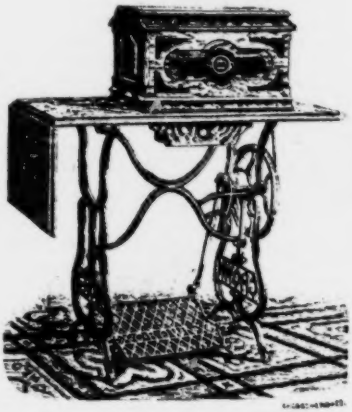
The Money Maker for the Seller and the Sure Satisfier for the Sewer.



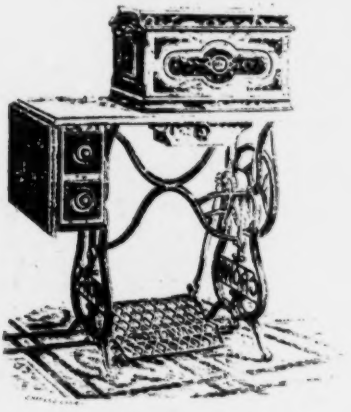
"CROWN"—Style No. 1.
Price, $40.00 cash; $50.00 time.



"CROWN"—Style No. 2.
Price, $45.00 cash; $55.00 time.



"CROWN"—Style No. 3.
Price, $48.00 cash; $58.00 time.



"CROWN"—Style No. 4.
Price, $50.00 cash; $60.00 time.

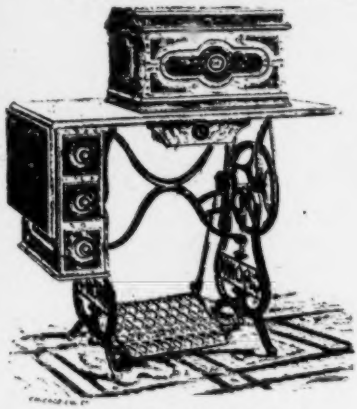
GEO. P. BENT, Sole Wholesale Agent.

For the Northwest, at 81 and 83 Jackson Street, CHICAGO, ILL.

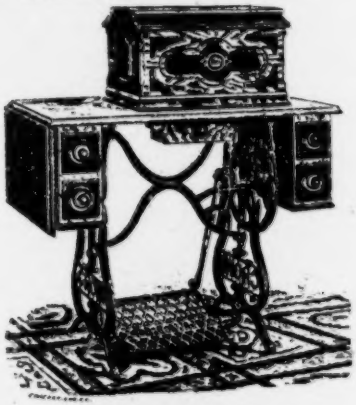
For the Southwest, at 1304 St. Louis Avenue, KANSAS CITY, MO.

The Profit-Making and Public-Pleasing "Crown" Sewing Machine.

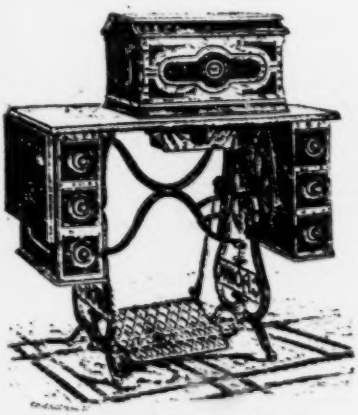
SIMPLY PERFECT AND PERFECTLY SIMPLE.



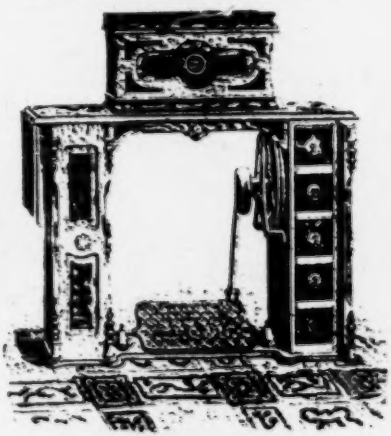
"CROWN"—Style No. 8.
Price, $53 00 cash: $63 00 time.



"CROWN"—Style No. 5.
Price, $55 00 cash: $65 00 time.



"CROWN"—Style No. 6.
Price, $60 00 cash: $70 00 time.



"CROWN"—Style No. 7.
Price, $70 00 cash: $80 00 time.

GEO. P. BENT, Sole Wholesale Agent,

For the Northwest, at 81 and 83 Jackson Street, CHICAGO, ILL.

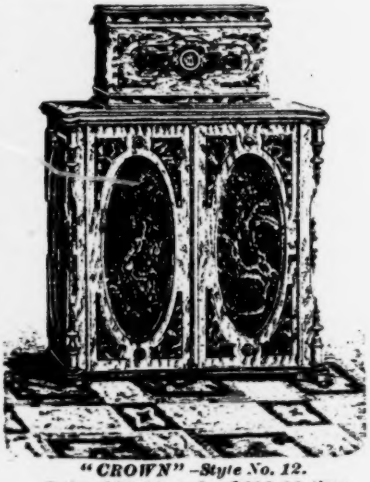
For the Southwest, at 1304 St. Louis Ave., KANSAS CITY, MO.

THE LIGHT AND QUIET RUNNING

"CROWN" SEWING MACHINE.

PERFECTION PERSONIFIED. ELEGANCE EMBODIED.

"CROWN"—Style No. 9.
Price, $70 00 cash; $80 00 time.



"CROWN" —Style No. 12.
Price, $90 00 cash; $100 00 time.

WARRANTY.

TO WHOM IT MAY CONCERN:

Be it known that the **Florence Machine Co.,** *of Florence, Mass., U. S. A.,*

WARRANT THE CROWN SEWING MACHINE

No._____ manufactured by them to be PERFECT, and if any part of it proves to be imperfect in material or workmanship, they will cause it to be made good, free of expense, immediately upon receiving information to that effect.

☞ *This guaranty is not limited as to time.*

Confirmed by

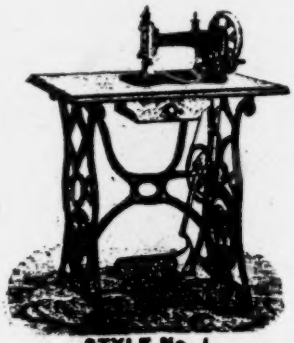
GEO. P. BENT, Agent,
Chicago and Kansas City.

DEALERS WANTED, to handle this machine in territory not already occupied. Address

Geo. P. Bent, Sole Wholesale Agent, Chicago, Ill. and Kansas City, Mo.

THE NEW YORK "SINGER" MODEL SEWING MACHINE

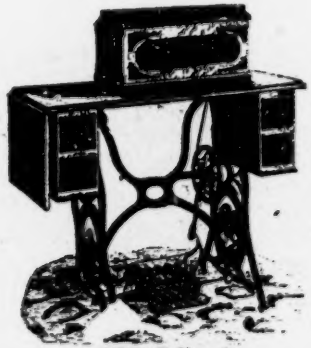
One of the Finest. Handsome and Meritorious.



STYLE No. 1.
Price, $30 00 cash; $40 00 time.

STYLE No. 2.
Price, $33 00 cash; $43 00 time.

STYLE No. 3.
Price, $35 00 cash; $45 00 time.



STYLE No. 4.
Price, $38 00 cash; $48 00 time.

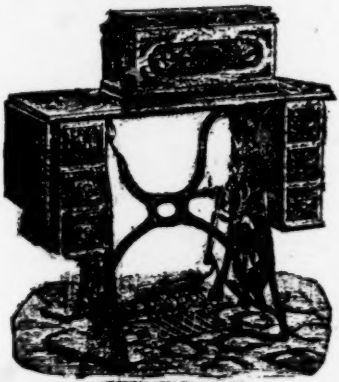
GEO. P. BENT, PROPRIETOR AND JOBBER;

81 and 83 Jackson Street, Chicago, Ill. 1304 St. Louis Ave., Kansas City, Mo.

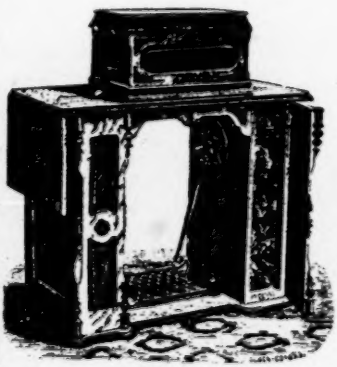
The New York "Singer" Model Sewing Machine.

EASY AND QUIET RUNNING, DURABLE AND FIRST-CLASS IN ALL RESPECTS.

STYLE No. 13.
Price, $37 00 cash; $47 00 time.



STYLE No. 14.
Price, $39 00 cash; $49 00 time.



STYLE No. 7.
Price, $50 00 cash; $60 00 time.

STYLE No. 11.
Price, $70 00 cash; $80 00 time.

GEO. P. BENT, Proprietor and Jobber,

81 and 83 JACKSON STREET, CHICAGO, ILL., AND 1304 ST. LOUIS AVENUE, KANSAS CITY, MO.

Machine,' and ask you how many of such sewing machines, with the treadle so hung in the cross-brace, you manufactured and sold to the trade during the year 1881? Approximately, I mean.

"A. Probably five to eight thousand.

"Q. 18. Were sewing machines like both of these exhibits, with their treadles hung respectively in the cross-brace, and cross-bar, as shown, publicly and openly sold to the trade in this country, and publicly and openly used by customers during the year 1881?

"A. Yes, sir.

427 "Q. 19. Did you, in the year 1882, or approximately to that year, issue any catalogue containing illustrated cuts of the two styles of machines, namely, the Crown and the New York Singer Model, like the two exhibits offered in evidence and testified to by you?

"A. I began to advertise these machines with new treadle bearings just as soon as I brought it out, and continued that right along up to the present date. I issued circulars often ten or twelve times a year.

"Q. 20. Please look at the sewing-machine catalogue I now show you, and state what it is.

"A. It is my catalogue of sewing-machine needles, oils, attachments, parts, and supplies, in which I also advertise sewing machines which I handled at Chicago and Kansas City.

"Q. 21. Are the two sewing machines, namely, the Crown and the New York Singer Model, like the two exhibits now before you, illustrated and shown in such catalogue, and, if so, on what page?

"A. They are. The Crown machine is illustrated on pages 31, 32, and 33, and the New York Singer Model machine is illustrated on pages 35 and 36.

"Q. 22. What year did you first issue this catalogue, or one like it, showing those machines identified on the pages in the last answer, to your customers?

"A. I can't tell the exact date, but somewhere from 1880

428 to 1883, I judge from the contents of this particular catalogue.

"Defendant's counsel here offers in evidence the catalogue identified by the witness and requests that the same may be marked 'Defendant's Exhibit George P. Bent, 1882 Catalogue.'"

Mr. KALLOCH: The pages referred to are 31, 32, and 33 for the Crown machine, and 35 and 36 for the New York Singer Model.

(The pages referred to, 31, 32, 33, 35, and 36, were here shown to the jury; the following being photographic copies of the cover and said pages:)

(Here follow photographs marked pp. 429 to 434, incl.)

435 FRIDAY, *April* 6, 1900.

Mr. KALLOCH: I will proceed with the reading of the deposition of Mr. Bent:

"Q. 23. What time in the year did you get up your catalogue?

"A. At various time-, but almost invariably issued the larger catalogue in the fall of the year than at other times.

"Q. 24. I now call your attention to the sewing-machine stand before you with the word 'Empress' gilded upon the stand, and ask you when and where, if at all, you know of such stand with the treadle hung in the vertical brace as therein shown, was manufactured and sold to the trade in this country.

"A. I have been selling it, to the best of my recollection, four or five years.

"Q. 25. With the treadle hung as shown in the stand?

"A. Yes, sir.

"Q. 26. About how many of such stands have you sold to the trade in the last four or five years?

"A. I can't be definite, but hundreds.

"Q. 27. Do these stands give good satisfaction so far as the hanging of the treadle in the brace is concerned?

"A. Yes, sir."

Defendant's counsel here offers in evidence the stand identified by the witness, and requests that the same may be marked "Defendant's Exhibit, George P. Bent Empress Stand."

(The stand referred to was here introduced in evidence as marked.)

436 "Q. 28. I now call your attention again to the two exhibits before you, Defendant's Exhibit, George P. Bent Old Vertical-brace, Treadle-bearing Sewing Machine, and Defendant's Exhibit, George P. Bent, Old Crown Cross-brace, Treadle-bearing Sewing Machine and ask you if you personally made or had made to your order, the stands and treadle devices of these particular machines?

"A. Yes, sir; I did.

"Q. 29. I now call your attention to these old pieces or parts which I now show you, and ask you what they are, and what they represent.

"A. They are the rough patterns for the stand used on my New York Singer Model machine from the year 1881—for several years thereafter.

"Q. 30. From what were the working patterns made?

"A. They were made from these rough patterns before me.

"Defendant's counsel here offers in evidence the devices just identified by the witness, and requests that they may be marked 'Defendant's Exhibit, George P. Bent Rough Patterns, Old New York Singer Model Sewing Machine.'"

(The devices referred to were here introduced in evidence as marked.)

"Q. 31. In the years '80 and '81 whom did you have make your

castings, or brace and treadle attachment for these Old Crown and New York Singer sewing machines?

"A. So far as I can now remember, they were all made for me by Mason and Davis, the founders, of this city.

437 "Q. 32. Mr. Bent, have you kept and retained your old catalogue and circulars and letters and papers for the years 1880, 1881, and 1882, relating to these Old Crown and New York Singer model machines?

"A. Not all of them.

"Q. 33. Have you any one in your employment who has full knowledge of these various exhibits offered in evidence in connection with your deposition, and who has been with you for any length of time?

"A. Yes, sir, I have. Mr. William H. Matchett, who really designed and originated the method of hanging the treadle in the Crown and Singer model machines in the exhibits shown.

"Q. 34. How long has Mr. Matchett been in your employment, and what position does he hold?

"A. Mr. Matchett has been with me since 1878 or 1879, continuously, and has had full charge of the sewing-machine department of my business. That is, the mechanical part.

"Cross-examination.

"(By Mr. EPHRAIM BANNING:)

"X Q. 35. You say that from the years 1880 to 1885 you were engaged in business in Kansas City; were you also engaged in business in Chicago? And, if so, will you please give the addresses of your place of business in both cities?

"A. Yes, sir; the house at Kansas City was a branch of
438 the Chicago house, which was located at 81 and 83 Jackson street, Chicago, while the house at Kansas City was I believe, located at 1304 St. Louis avenue.

"X Q. 36. During the existence of your branch office at Kansas City, was it always at one address?

"A. No, sir; but for the most of the time it was at the address given above.

"X Q. 37. In the earlier or latter part of the time?

"A. The latter part, though I was located, for a few months when I first went to Kansas City, in 1880, on Union avenue, the number I do not remember.

"X Q. 38. Did you have charge of and direct the style of construction used in your sewing-machine stands during those years?

"A. Yes, sir.

"X Q. 39. Can you positively identify the machines here offered in evidence, as machines that were made and sold by you before 1882?

"A. No, sir; I cannot without reference to my books tell when the New York Singer model machine in evidence was sold, but I can state that the stand is of the same pattern or model, both on the

Crown machines and the Singer model machines, as those which we originated in 1880 or 1881.

"X Q. 40. As to the exact year, you do not remember, as I understand it?

"A. I do not exactly remember the month, but it was the winter of 1880 and 1881.

"X Q. 41. How do you fix it in the winter of 1880 and '81?

"A. Advertisements of these styles of stands for the Crown
439 and New York Singer model machine were issued in 1881, and I further fix it by my dissatisfaction with the stand for the Crown machine which was furnished to me by the Florence Machine Company, the makers of the Crown machine head, which said stand I did not like and after using it for a few months Mr. Matchet and myself undertook to make something better, and this could not have been earlier than 1880, nor could it have been later than 1881, from the fact that the new stand was advertised in the latter year.

"X Q. 42. Was this after your first dealing with the Florence Machine Company?

"A. Yes, sir.

"X Q. 43. This exhibit marked 'Defendant's Exhibit, George P. Bent Old Crown Cross-brace, Treadle-bearing Sewing Machine,' is one you have taken from stock, and not one that was used prior to 1882; am I right?

"A. Yes, sir.

"X Q. 44. In all of these exhibits offered in evidence a treadle is not provided with trunnions that oscillate in bearings or holes in the lower extremity of the frame and cross-piece but is mounted on pivot points in supporting screws; am I correct?

"A. What is trunnions?

"X Q. 45. Trunnions are bearing portions adapted to oscillate or vibrate in bushings or in a bearing hole; in view of this explanation, can you now answer my question?

"A. I hardly think that I can answer that question satisfactorily either to myself or to you. The devices which I made and which are exhibited here, show that the treadle proper operated on
440 pivoted points, said points passing through the brace above the treadle in the New York Singer Model machine, and through the brace below the treadle in the Crown machine.

"X Q. 46. In other words, there are two screws used to join the braces and legs together, and these screws are pointed at their inner ends to form pivoted points upon which the treadles vibrate or oscillate; is that correct?

"A. Yes, sir.

"X Q. 47. You say you have manufactured and sold hundreds of these machines during the year 1881; is that fact as definite as the date you have fixed as originating this idea, or is it merely fixed from the fact of your negotiations with the Florence people?

"A. I cannot state definitely, off-hand, how many machines I sold in the year 1881, but I could, by reference to my books, find out exactly how many machines I sold during the year 1881, though

perhaps I could not tell definitely how many machines I sold in that year with treadle devices such as shown in the exhibits.

"X Q. 48. Are you sure you sold any machines during the year 1881, that contained treadles similar to these offered in evidence?

"A. Yes, sir; I sold hundreds of them.

"X Q. 49. Can you give the names of any customers who bought and used those machines in 1881?

"A. I could by referring to my books.

"X Q. 50. But you can't now?

"A. No, sir, not on the spot.

"X Q. 51. Referring to 'Defendant's Exhibit, Marked George P. Bent, Rough Patterns,' which have been offered in evidence;
441 when were these rough patterns made?

"A. In the winter of the years 1880 and 1881.

"X Q. 52. These identical ones in evidence?

"A. Yes, sir.

"X Q. 53. You know somewhat the effect of age, of acid marks on castings which have been pickled; can you tell how long it generally takes to obliterate such marks?

"A. No, sir, I cannot; I am not familiar with such things.

"X Q. 54. You say these were made in the winter of 1880 and 1881; do you know that to be, personally, a fact, or is it from some employee that you take your data, and that they have been preserved all this length of time?

"A. I did not have any more than a general supervision of the getting up of these patterns, the idea as to the treadle construction was Mr. Matchett's; he told me his ideas, I was satisfied with them, and told him to go ahead and have the patterns made. Now, as to whether those patterns were complete in December, 1880, January, February, March, or April, 1881, I cannot positively swear, but I do know that I began to advertise machines with stands made from these original patterns during the year 1881.

"X Q. 55. I see you do not understand my question, so I will ask it again. Do you know from personal knowledge that these patterns before you were made during the year 1881, and preserved all of these thirteen years, or was this knowledge imparted to you by others?

"A. I think I understand your former question, and so far as I understand it, my former answer answers it. I know it of
442 my own knowledge, though I, myself, have not had personal individual charge of the patterns all these years, but they have been preserved as are other patterns in my factory all this time."

(Signed) GEO. P. BENT.

Mr. KALLOCH: Then the deposition is resumed on October 31, 1894, and the testimony of SUSAN DILWORTH is taken, who, after having been duly sworn, testified as follows:

"Direct examination.

"(By Mr. OFFIELD:)

"Q. 1. Please state your full name, age, residence and occupation.

"A. Susan Dilworth; 408 West Forty-third street; occupation, grocer; age, thirty-four.

"Q. 2. How long have you lived in the city of Chicago continuously?

"A. Twenty-two years past.

"Q. 3. Please look at the sewing machine that I now show you, marked 'Defendant's Exhibit, George P. Bent Old Vertical-brace, Treadle-bearing Sewing Machine,' and state when you first saw this machine, and all you know about it.

"A. As near as I can possibly tell, it was in 1882. How I can tell is, that I know that we started our grocery at that time. I had the sewing machine before we moved there, the date I couldn't give.

"Q. 4. Before you moved where in 1882?

"A. To this present number, 408 West 43d.

"Q. 5. What time in the year 1882 did you move to your present place of business, 408 West 43d street?

"A. Ninth day of April.

443 "Q. 6. And how long before the 9th day of April, had you had this sewing machine that I have called your attention to?

"A. It was in February, but the date I couldn't possibly tell.

"Q. 7. How do you know or recollect that you had this sewing machine now before you when you moved to your present place of business in 1882?

"A. I moved it there with me.

"Q. 8. Have you ever had any other sewing machine since that time?

"A. No, sir.

"Q. 9. Have you had this sewing machine now before you as an exhibit continuously in your possession ever since February, 1882?

"A. Yes, sir.

"Q. 10. Have you used it continuously all that time?

"A. Yes, sir.

"Q. 11. What kind of satisfaction did the machine give?

"A. Gave good satisfaction.

"Q. 12. Is the machine in the same condition that it was when you bought it in February, 1882, except the wear and tear it has received in use?

"A. Yes; it is in the same condition; it is pretty well worn. Of course there is a new belt to it.

"Q. 13. When did you send it down here to the court where you are now giving your testimony?

"A. Yesterday.
"Q. 14. Who did you get this machine of, in February, 1882?
"A. George P. Bent.
"Q. 15. At his factory in Chicago, Illinois?
"A. Yes, sir.

444 "Cross-examination.

"(By Mr. BANNING:)

"X Q. 16. You say you started your grocery in 1882, and by that you fix the date on which you purchased the machine; have you any other means of fixing the date of starting this grocery store other than your memory?
"A. Well, we moved to the town of Lake that same year when we first started the grocery store.
"X Q. 17. Did you move to the town of Lake before or after you started the grocery store?
"A. We moved there to start the store.
"X Q. 18. Did you obtain any receipt for the purchase and payment of this machine at that time?
"A. No, sir.
"X Q. 19. And you are depending on your memory entirely as to whether you purchased it before or after you started the store, or have you refreshed your memory in any other way lately?
"A. No, sir; I know I bought the machine before, because I moved it there with me.
"X Q. 20. Has the machine been out of your hands at any time for repairs?
"A. Yes; once it has been at the factory.
"X Q. 21. How long was it at the factory?
"A. Two days it was there.
"X Q. 22. Did you pay any particular attention to the kind of treadle that was on the machine when you first bought it, and are you sure it is the same treadle mechanism that is on it now?
"A. Yes, sir; I am sure it is the same.

445 "Redirect examination.

"(By Mr. OFFIELD:)

"R. D. Q. 23. What part of this old machine of yours was back to the factory once for repairs, as you have stated?
"A. The top part of the machine.
"R. D. Q. 24. The head?
"A. Yes.
"R. D. Q. 25. Has the stand of the machine ever been out of your house for any purpose since February, 1882?
"A. No, sir."
(Signed) SUSAN DILWORTH.

Mr. KALLOCH: Then follows the testimony of WILLIAM H. MATCHETT, which is as follows:

"Direct examination.

"(By Mr. OFFIELD:)

"Q. 1. Please state your name, age, residence, and occupation.

"A. My name is William H. Matchett; 6940 Wentworth avenue, Chicago; occupation, manager for George P. Bent; age, 41.

"Q. 2. How long have you lived in Chicago, continuously?

"A. Twenty-one years.

"— *8.* How long have you been in the employment of or connected with Mr. George P. Bent?

"A. Well, since the first Monday in May, 1879.

"Q. 4. In what capacity?

"A. Well, foreman and general utility man, manager.

"Q. 5. What has been Mr. Bent's business since the year 1879?

446 "A. The principal part of his business for several years was sewing machines; it has gradually drifted into organs and pianos, although he still remains in the sewing-machine business.

"Q. 6. He is now a manufacturer of organs and pianos?

"A. He is now a manufacturer of organs and pianos and a jobber in sewing machines.

"Q. 7. Please look at the two sewing machines or stands now before you, one marked 'Defendant's Exhibit George P. Bent Old Vertical-brace Treadle-bearing Sewing Machine,' and the other marked 'Defendant's Exhibit George P. Bent Old Crown Cross-brace Treadle-bearing Sewing Machine,' and state if you know when, where, and under what circumstances the stands of those sewing machines were first gotten up and built by Mr. Bent for the sewing-machine trade exactly in the form and shape as shown in these exhibits.

"A. This 'Exhibit, Old Vertical-brace Treadle-bearing Sewing Machine' was devised and gotten up by me for George P. Bent, the work beginning in the latter part of the year 1880, and being finished and ready for the market in the early part of the year 1881, just as it is, that is as far as the stand, brace, treadle and wheel pitman are concerned; the head of the machine has been repaired and one or two new parts in. 'Exhibit George P. Bent Old Crown Cross-brace Treadle-bearing Sewing Machine' was got up and designed by me in the year and time stated above, as far as the mechanical construction

447 of the treadle and cross-treadle bearing bar is concerned; improvements have been made on the wheel bearings and on the pitman bearings and in the design of the stand; as far as the shape of the castings of same is concerned. These improvements in sewing-machine stands were got up or prompted by the request of Mr. George P. Bent while I was with him at dinner in Schlenker's restaurant, on State street near Jackson street, Mr. Bent wanting to know if I had seen the improvement that had been made by the Domestic Company in treadle bearings, dispensing with the

old cone or rod bearing, and using a knife or scale-joint bearing. I told him I had not seen this improvement; he said he should like very much if I would step around after dinner and see it, as he thought our present mode of hanging the treadle caused a great deal of friction and made the machine run heavier than it should. I made the investigation as requested, not only looking at the Domestic but one or two other sewing machines, and as our office and factory at that time were in separate buildings, the office being located at 81 and 83 Jackson street, the factory and shipping-room being at 45 and 47 Third avenue, I did not return to the office to report to George P. Bent; but we met upon the train, Chicago, Rock Island & Pacific, on our way home from work, he residing at that time on Prairie avenue near 35th street, and I was residing on La Salle street then, called Arnold street at that time, now known as La Salle avenue. Mr. Bent sat down beside me on the train and asked me if I had made the investigation as requested, I told him
448 yes, that I did not like the device used by the Domestic, scale joint, as it was liable to give trouble and would not overcome the noise and rattling which we so much desired to do. I took from my pocket a tablet and sketched to him while we were riding in the train, the idea or novice that I thought would be a decided improvement on anything that I had seen, namely, hanging the treadle in the center brace by means of two steel centers, explaining to him that these could be hardened and by means of a lock-nut and a slot in the end of the screw all lost motion and noise would be taken up and the wearing qualities of the same would be superior to anything in the market. Mr. Bent at once expressed his satisfaction with the suggestions made and requested me to go ahead in the morning and have the same put into execution; this was done on our Singer or Eagle stand, and the stand produced as it now appears in evidence, and put upon the market in the early spring of 1881. Mr. Bent, not wanting to change the construction of the Crown stand in regard to the position of the wheel, but to have the wheel hang on the outside of the right leg or the stand so that the leg would form a dress shield and also so that the head of the machine should be kept as far to the right of the operator as possible, I suggested to him that it would be necessary and better for us to make a cross-brace treadle-bearing rod, describing the same to him, and he at once consented to it, and suggested that we put two little oil cups, or hollow cups below the rod to catch the oil that might drop from the center, but he did not think it would be necessary for us to do that on the Singer stand, as the price of that machine was
449 so low that he could not afford to put any extra expense upon it. The patterns were got up and the Crown machine put upon the market simultaneously with the Singer or Eagle stand, in the early spring of 1881.

"Q. 8. You call 'Defendant's Exhibit, George P. Bent Old Vertical-brace Treadle-bearing Sewing Machine,' the Eagle stand, because it has an eagle cast in the legs of the stand as a trade-mark, do you not?

"A. Yes, sir.

"Q. 9. How many stands exactly and precisely like 'Defendant's Exhibit, George P. Bent Old Vertical-brace Treadle-bearing Sewing Machine' did George P. Bent manufacture and sell openly to the trade, in the year 1880? I mean approximately.

"A. I do not think there was any sold in the year 1880; there may have been one or two samples sent out.

"Q. 10. During the year 1881?

"A. There must have been several hundred; I should say in the neighborhood of at least from 100 to 150 a month, but I am not sure.

"Q. 11. What satisfaction did these stands give, especially as to the treadle bearing hung in the brace, as shown in this exhibit?

"A. Excellent satisfaction.

"Q. 12. Ever any complaints about that?

"A. I never had a complaint about the stand of this machine.

"Q. 13. For how many years did George P. Bent manufacture and sell these stands with the treadle pivoted or hung in a vertical double brace as shown in this exhibit before you?

"A. Five to seven years; he drifted out of it gradually; we have sold some quite recently since that.

450 "Q. 14. Please describe briefly how the treadle is put into the vertical double brace of this stand, and then how the treadle brace is afterwards allied with the stand.

"A. The brace is cast in a cross of 'X' shape, being strongly united at the center; in the upper part of the brace are cast or bored two holes to receive two common stove bolts. The lower ends of the brace two holes are bored and tapped to receive the two steel centers, these centers are screwed into these holes and the treadles hung between them in the brace. These centers also pass through two large holes that are bored in the lower part of the stand and project far enough through to receive a lock-nut, thus forming the double purpose of uniting the stand to the brace and giving a bearing for the treadle. The upper part of the brace is fastened to the stand with two stove bolts.

"Q. 15. Have you with you your vertical double brace with the treadle hung in it, as described by you separate and apart from the stand?

"A. I have; it has been before me and in my hands while I have been describing, as above.

"Q. 16. Is this it? (Indicating.)

"A. This is it.

"Defendant's counsel here offers in evidence the vertical double brace and treadle identified by the witness, and requests that the same may be marked 'Defendant's Exhibit, Bent-Matchett Separate Old Double Brace and Treadle.'

"Q. 17. How do you fix the fall of the year 1880 as the year you got up and disclosed to Mr. Bent the design for the vertical double brace and treadle and the cross-bar brace and treadle, as
451 shown by these two exhibits before you and described by you?

"A. There are several things that impress this upon my mind and make me certain that the dates as given are correct. The most important is, that I lost my only child in that year and know from the circumstances of home life, incidents that were taking place at that time, my place of residence; the parties who were occupying the lower flat of the building in which I then lived—the fact that the landlord of the building who resided in the lower flat moved out in the spring of 1880 and Mr. Purdue rented the flat through me, and his daughter, Ada Purdue, a public school teacher, was present in my rooms when I was sketching out the changes that we were about to make; that evening my wife jokingly remarked that if I got a patent on this I might make my fortune. I said that we would make the fortune in selling the sewing machines and not in patents, as the thought had not entered my mind of applying for a patent, but of getting up something that would suit Mr. George P. Bent's requirements. I know that it was winter of the year, as in going from the factory, 45 Third avenue, to the Lake Shore foundry on Illinois street, I remember distinctly the snow and slush in passing over by the way of Wabash avenue to avoid the holiday rush on State street.

"Q. 18. Your point-center bearings, as shown in your treadles hung in the vertical brace, and cross-brace, are entirely different bearings, as I understand you, from the knife-edge or scale-beam bearings of the Domestic sewing machine, and overcome all the objections of those bearings?

"A. Yes, sir.

452 "Q. 19. Were these machines with treadle bearings hung in a vertical brace and in the cross-brace like these exhibits sold anywhere else to the trade in the United States, in the year 1881, besides Chicago?

"A. They were advertised and sold in all the States and Territories controlled by Mr. Bent. Those States and Territories can be ascertained by his advertisements of that year; they are not fresh in my memory.

"Q. 20. I mean, did Mr. Bent have any branch house and sell these sewing machines there in any other city than Chicago during the year 1881, and if so, what city?

"A. He had a branch house in Kansas City, Missouri.

"Q. 21. Please look at 'Defendant's Exhibit, George P. Bent Rough Patterns, Old New York Singer Model Sewing Machine,' and state what you know, if anything, about those patterns.

"A. Those are the patterns made for George P. Bent by Mason & Davis, proprietors of the Lake Shore foundry, in the fall of 1880 and early spring of 1881.

"Q. 22. Have they been in George P. Bent's possession ever since?

"A. They have been in George P. Bent's possession ever since; we hold them, as, in case of a fire in the foundry, we would be able to reproduce our stand; the working patterns being at the foundry.

"Q. 23. What kind of a brace and treadle did Mr. Bent use in his sewing machines prior to the adoption of those braces shown in these exhibits, in 1880?

"A. The brace was similar in form but was simply used
453 for bracing the stand, and had nothing whatever to do with holding the treadle, the treadle being held on a straight iron rod with cast cone bearings; the hole in the treadle was bored large and countersunk on the outer edges of the bearing. The hole in the cones was bored small so as to fit the rod, and was fastened to the rod with a screw, in this way allowing for the adjustment in case of wear.

"Q. 24. Did the lower end of each brace in those old machines prior to 1880 fork over this treadle rod?

"A. The lower end of the brace in what is described as our Eagle stand forked rod, but the lower end of the Crown brace did not extend down to the treadle rod, hence we made a separate brace as we did not care to widen out our Crown stand and taking the brace down, as in the case of the Eagle stand would have made the stand too narrow to be comfortable for a lady using the machine.

"Q. 25. Please look at 'Defendant's Exhibit George P. Bent Empress Stand,' and state what you know about the manufacture and sale of such stand with the treadle hung in the brace as therein shown.

"A. This stand was manufactured and sold by the Diamond Sewing Machine Company and their successors, at Arlington Heights, Cook county, Illinois; it has been on the market probably three years or more. Before it was put on the market, Mr. Kendall, the president of said company told me that he was going to get up such a stand and hang the treadle in the brace, similar to the way
in which I had hung it in the Eagle stand, but as the cross-
454 brace or casting in their Anchor stand did not come as low down as that of the Eagle stand, it would be necessary to have the brace extend below the old hole in their stand that was made originally for the treadle rod.

"Q. 26. How extensively have these Empress stands been manufactured and sold to the trade in this country for the last three years, as far as you know?

"A. They have been offered to the public and advertised quite extensively, but as to the number that have been sold, I have no means of knowing. Mr. Bent has sold from fifty to one hundred and fifty a month.

"Q. 27. What satisfaction did these different stands give so far as hanging the treadle in the brace as there shown, is concerned?

"A. Very good satisfaction; we have had no complaints.

"Recess.

"Cross-examination.

"(By Mr. BANNING:)

"X Q. 28. Are you testifying to all of these dates from your memory, or have you had your memory refreshed by external aids in the last fortnight?

"A. I have refreshed my memory by looking up dates and entries in my personal cash book.

"X Q. 29. You say that you obtained the idea of hanging your improved treadle from a machine fitted with a knife-edge, or scale bearing, and that you desired to include the same; is that true?

"A. I do not understand that I said I obtained that idea
455 from a knife-bearing, but that my attention was called to a knife or scale joint bearing and that I did not consider it practical as applied to the Domestic machine, and thought or contrived the present design as being superior to it.

"X Q. 30. But you saw this machine fitted with a knife-edge bearing before you designed your improvement, and it was by looking at this machine, or having your attention called to it that the idea was suggested to you of using the pivot points for suspending and supporting the treadle; is that correct?

"A. I would not be willing to say that that was correct.

"X Q. 31. You testified in your direct examination that Mr. Bent called your attention to a machine in which the old cone and rod bearing was dispensed with, and that a knife or scale-joint bearing was used; that he desired you to see this improvement; that you did as he requested, and afterwards suggested your improvement; is that true?

"A. That is true.

"X Q. 32. Then, am I to understand that your improvement was conceived after or before you made this investigation?

"A. I had given the matter some thought before this investigation, and had partly embodied my own ideas in the treadle of a sewing machine that I put up especially for my wife, but the thought was matured and put into more practical shape by the request of Mr. Bent that I should see what could be done.

"X Q. 33. Did you communicate your idea to Mr. Bent before or after you made this investigation?

456 "A. To the best of my knowledge, while sitting at the dinner table I told him that unless the scale-joint bearing he referred to was differently applied from what I imagined it was, it was not practical and that a center bearing on the same principle as a lathe center but with a longer point might be applied. But the thought had not matured in my mind as to how. In the afternoon of the same day, giving it more thought, I devised how.

"X Q. 34. And this device was fully matured only after you had seen the machine with the scale-joint bearing?

"A. Yes, sir.

"X Q. 35. Both you and Mr. Bent considered your improvement a very valuable one, did you not?

"A. We did.

"X Q. 36. Can you say why you or he never suggested the taking out of a patent on the same?

"A. The matter was talked of, I think I suggested it to Mr. Bent myself, the advisability of doing so, but it was a question whether we could put it in a strong enough form to hold it, knowing as we do, the uncertainty of patents, from other experiences.

"X Q. 37. Then you didn't think that it contained sufficient novelty to make it patentable?

"A. I did think it contained sufficient novelty to make it patentable, that was why I suggested it. But I had not the means of securing the patent, and as I was working for Mr. Bent on a salary, I hesitated pressing the matter lest he should think that I would deprive him of the use of the invention, or was desirous of doing so, and I did not want to compromise my position with him.

457 "X Q. 38. According to your testimony, there were a great many machines made containing this improvement, somewhere about 150 a month, was there not?

"A. There were.

"X Q. 39. You fix the date on which you made the original sketches from the fact that your landlord moved away in the spring of 1880, and that his daughter, Miss Purdue, was in your rooms the evening you made the sketches, and that this was during the winter; is that so?

"A. I did not state that my landlord, Mr. E. J. Jupp, moved from Chicago to Milwaukee in the spring of 1880. I did not state that Miss Purdue was his daughter, but that she was the party who rented his rooms and lived in the lower flat, in the same house with me, and that she was present.

"X Q. 40. And this was in the winter?

"A. Yes, sir. The late fall or early winter.

"X Q. 41. How long did Mr. Purdue remain in that flat?

"A. About one year, from June 1880, to May 1881.

"X Q. 42. How long were you at work on the idea before you had a machine or machines fitted up and on the market with your improvements?

"A About three months.

"X Q. 43. This Crown machine, offered in evidence, is from the stock, and is not a machine that was made prior to 1882 or 1883, is it not?

"A. This particular stand was not made in 1883, or prior to it, it was taken from stock.

"X Q. 44. At that time, between the fall of '80 and the fall of '83, you had such charge of Mr. Bent's factory that you knew

458 pretty near all that was going on in the shape of manufacture, did you not?

"A. Yes, sir.

"X Q. 45. Were these patterns which are now before you, and marked 'Defendant's Exhibit George P. Bent Rough Patterns,' made during that time, and if so, please state as nearly as you can the time that they were made?

"A. They were made between November of '80 and March of '81.

"X Q. 46. And they were made under your direction, from your sketches or drawings, so that you can positively identify them?

"A. Yes, sir, and have been in my possession ever since, as foreman for George P. Bent.

"X Q. 47. So that you can safely say that the machines which were put on the market at that time, or in the neighborhood of that time, were similar to these patterns, in fact, were made from patterns that were made from castings identical with these?

"A. Yes, sir.

"X Q. 48. Calling your attention to the Exhibit 'Empress' Stand, you said that these brackets were made three years or more, or that the method of hanging the treadles, has been used three years or more, on this style of machine. How much longer than three years can you fix definitely?

"A. I cannot state that it was any longer than three years as the only incident that assists me at the present time in placing the date would not carry me back further than that.

"X Q. 49. Will you please state the incident that enables you to fix three years?

459 "A. That I had in my employ at that time an adjuster who discussed the stand with me when it was first brought into our factory, and who is out of my employ for the last three years.

"X Q. 50. In what year did Mr. Kendall, the president of the Diamond Sewing Machine Company, tell you that he was going to get up such a stand, and can you name the month or incidents, or where he told you?

"A. It was about three years ago; I cannot name the month. The place was in my office, 325 South Canal street.

"X Q. 51. Did you communicate this to Mr. Bent, or didn't you think it of sufficient importance to tell him of it?

"A. I do not think that I communicated it to Mr. Bent, I may have done so. I did, on one occasion, probably two years ago, suggest to him that they were all coming our way, and if we had taken out patents we would have cut these fellows out.

"X Q. 52. Do you consider this Empress treadle as satisfactory as yours?

"A. Do you refer to the treadle the manner of hanging the treadle, or the brace?

"X Q. 53. To the whole thing.

"A. It might, with the average operator be considered as good, but certainly not with the manufacturer.

"X Q. 53½. I want your opinion.

"A. From a manufacturer's standpoint, no.

"X Q. 54. How long is it since you have been notified that you would be called upon to testify in this case?

460 "A. The first definite notification that I had was from Mr. Bent on yesterday.

"Redirect examination:

"R. D. Q. 55. Calling your attention to 'Defendant's Exhibit George P. Bent Rough Patterns, Old New York Singer Model Sewing Machine,' I ask you to look at a loose projection on the double vertical brace, and an apparent connection between the upper and lower part of said brace and a hole in the center of said brace, not appearing in the old exhibit in this case; what have you to say as to these little details of difference?

"A. That which you call a loose projection is intended to be a stationary, solid piece and has got loose in transit from our factory

to this office. On the first few hundred stands that were made from this pattern and under this device, this loose projection forms one of the resting places for the journal of the band wheel, but after making a few hundred of these stands, the difficulty presented itself of bringing the brace into line with the center on the leg of the machine, and I discarded it. The other piece is what we call a gate, and was used simply by the molders in their work. The little hole is also used by the molders to lift it out of the sand.

"R. D. Q. 56. Can you mention any additional fact that makes the manufacture of these vertical-brace treadle machines like this old exhibit absolutely certain as carried on extensively in the year 1881, if so, give it.

"A. At the request of Mr. Bent, I paid a visit to the factory
461 of the Florence Machine Company, at Florence, Massachusetts, in July, 1882, and had a special interview with Mr. W. D. Hale, a large stockholder in the company and formerly its president, with whom I was well acquainted, and in the office of his bank at Northampton we discussed the matter of improvements in the Crown machine. And among other things that were spoken about was the number of machines that we had sold during the year 1881. I remember distinctly telling him then that one of the great factors in enabling us to sell so many machines, were the improvements we had made on our stand, giving us an advantage in this respect over our competitors. This circumstance impressed itself on my mind, as it was the first time I visited the Florence Machine Company's works, and all the incidents are fresh in my mind.

"Recross-examination.

"(By Mr. BANNING:)

"R. X Q. 57. What other fact besides your memory leads you to fix the year 1882 and the month of July in that year for your visit to the Florence Machine Company's works, or are you depending on your memory entirely?

"A. No, sir; as I stated before, I refreshed my memory last evening on these points."

(Signed) WILLIAM HENRY MATCHETT.

Mr. KALLOCH: The next testimony is taken on November 1, 1894, WALTER SCATES, who, after having been duly sworn, testified as follows:

462 "Direct examination.

"(By Mr. OFFIELD:)

"Q. 1. Please state your name, age, residence, and occupation.

"A. My name is Walter Scates; age, 54; residence, Chicago, Illinois; occupation, newspaper publisher.

"Q. 2. What newspaper do you publish?

"A. 'The Sewing Machine Advance.'

"Q. 3. Where do you publish that paper?

No. 6. Vol. III. | CHICAGO, JUNE 15, 1881.

THE VERDICT OF THE PEOPLE,

FROM WHICH THERE IS NO APPEAL, IS THAT

THE ELDREDGE

Is the Leading Strictly First-class Sewing Machine.

Address, for Circulars and Information,

Eldredge Sewing Machine Co., Chicago. IT LEADS THE WORLD!

The Household

SEWING MACHINE.

Manufactured by

PROVIDENCE TOOL COMPANY

PROVIDENCE, R. I.

For Family Use & Manufacturing Purposes.

Easy Running. Simple in Construction. Perfect in Workmanship.

Runs Lighter and Sews Faster than any Other Machine in the Market.

CORRESPONDENCE SOLICITED.

Agents Wanted in Unoccupied Territory.

CHICAGO OFFICE:

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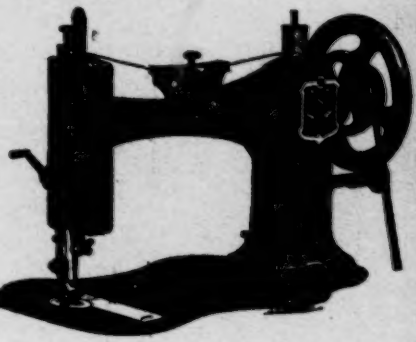
S. H. & E. Y. MOORE, Agts.



"A. In Chicago.

"Q. 4. Are you the editor as well as publisher of the paper?

"A. I am.

"Q. 5. How long a time continuously have you been editor and publisher of the 'Sewing Machine Advance'?

"A. Since May, 1881, I have been publisher continuously since May, 1881. And editor continuously since, except two years, beginning with May, 1882.

"Q. 6. Why were you not editor as well as publisher of the 'Sewing Machine Advance' after May, 1882?

"A. On account of serious illness which incapacitated me for the business.

"Q. 7. Did you personally alone edit this 'Sewing Machine Advance' from May, 1881, to May 1882?

"A. I did.

"Q. 8. Who had sole charge of the soliciting of advertisements for and of the advertising department of your paper, the 'Sewing Machine Advance,' between May, 1881, and May, 1882?

"A. I did.

463 "Q. 9. Do you know George P. Bent, a sewing-machine manufacturer, and organ and piano manufacturer, in Chicago?

"A. I do.

"Q. 10. Did you know him in the years 1881 and 1882?

"A. I did.

"Q. 11. What was the business of Mr. George P. Bent during the years 1881 and 1882, prior to May 1st, 1882?

"A. He was wholesaling sewing machines, sewing-machine attachments and organs at 81 and 83 Jackson street, Chicago.

"Q. 12. Please look at the paper which I now hand you, and state what it is.

"A. It is a copy of the issue of the 'Sewing Machine Advance' for the month of June, 1881.

"Q. 13. Was that copy issued and circulated to the trade in the usual course of business by you as editor and publisher in June, 1881?

"A. It was.

"Defendant's counsel here offers in evidence the paper identified by the witness, and requests that the same may be marked 'Defendant's Exhibit Sewing Machine Advance, June 15, 1881.'"

(Following is a photographic copy of front cover of said paper:)

(Here follows photograph marked p. 464.)

465 "Witness says this paper was issued monthly, and that was the date of issue for that month.

"Q. 14. Prior to June 15, 1881, had you called upon Mr. Bent for any purpose in relation to your publication of this exhibit, or your paper?

"A. I had.

"Q. 15. Please state for what purpose.

"A. For the purpose of soliciting an advertisement from him for the paper.

"Q. 16. Did you secure an order for such advertisement?

"A. I did.

"Q. 17. Does such advertisement appear in this exhibit, and if so, upon what page thereof?

"A. He gave me an order for an advertisement which appears on page 105, the middle advertisement on the page, with his name affixed thereto.

"Defendant's counsel also offers in evidence the particular advertisement identified by the witness in this exhibit, and requests that the same may be identified with this suit by marking on the margin thereof, 'Defendant's Exhibit George P. Bent, June 15, 1881, Sewing Machine Advertisement.'"

(The page referred to was here shown to the jury, the following being a photographic copy thereof:)

(Here follows photograph marked p. 466.)

467 That advertisement is identified upon this page of the "Advance" as being the page referred to, and it contains an advertisement reading as follows: "Crown organs and sewing machines. The best quality," etc., with a cut illustrating the Crown sewing machine. It appears on a page of "The Sewing Machine Advance" of June 15, 1881.

The deposition continues:

"Q. 18. Was this advertisement in all copies of the 'Sewing Machine Advance' published and circulated by you to the trade in June, 1881, as herein shown?

"A. It was.

"Q. 19. How extensive a circulation did your paper, the 'Sewing Machine Advance,' have in the sewing-machine trade in the month of June, 1881?

"A. The circulation was, at that time, and for that month, something over 5,000 copies.

"Q. 20. Who furnished the wood cut of the sewing machine to you which appears in the advertisement of this June, 1881, publication?

"A. Mr. Bent furnished it.

"Q. 21. At the time you visited Mr. Bent's sewing-machine factory to secure this advertisement, prior to June 15, 1881, did you see and examine the sewing machines which he was then manufacturing or selling?

"A. I saw it either on the occasion of that visit, or upon a visit shortly prior thereto.

"Q. 22. Did Mr. Bent, prior to June 15, 1881, call your attention to any new features of construction or improvement in the stand of his machine?

"A. He did.

MARTIN'S

GENUINE WILLIAMS SEWING MACHINES,

OF MONTREAL.

Conceded to be the Best Machine of its kind in the Market.

VIRTUALLY SELF-THREADING.

LIGHT-RUNNING, ANTI-FRICTION STAND!

Elegant Gothic Top Cabinet Work. Built Up Tables.

PERFECT ADJUSTMENT,

EXCELLENT WORKMANSHIP.

Protection to Agents in their Territory

These Machines have been on the Market for Twenty-five Years.

Beware of Artful Dodgers with their IMITATIONS *"WILLIAMS."*

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THOMAS H. MARTIN, No. 265 and 267 State St., CHICAGO, ILL.

CROWN ORGANS AND SEWING MACHINES

The Easiest to Sell and the Best Quality.

First-Class, and Prices Low.

Samples sent on Five Days' Trial. Fancy Descriptive Circulars and Prices Sent to Dealers. The Handsomest and Most Meritorious GOODS IN MARKET.

GEO. P. BENT, Chicago and Kansas City.

TRYBER & SWEETLAND.

MANUFACTURERS OF

THE CHICAGO SEWING MACHINE.

The Handsomest and Best Fitted Machine of the "SINGER" Pattern now in the Market.

The Chicago Machines have the following improvements:

Loose Balance Wheels, for Winding Bobbins. Nickel Plated Balance Wheels, a very Handsome Finish. Self Threading Needle Clamps. Self Threading Thread Eyelets. Improved Patent Tension. Improved Stands with Casters, and the Band Wheel hung on Adjustable Centers.

Send for Our Factory Prices.

CAUTION. A party in Chicago advertises the "Chicago Make" of Singer, with the evident intent to lead people to think that he handles our machines. The "Chicago" can be procured in this city ONLY OF OURSELVES.

TRYBER & SWEETLAND,

47, 49, 51, 53 and 55 S. JEFFERSON STREET, CHICAGO, ILL.

"Q. 23. State generally what such new feature was.

468 "A. It was an improvement in the manner of hanging the treadle.

"Q. 24. Please look at the two machines now shown you, one marked 'Defendant's Exhibit, George P. Bent Old Vertical-brace Treadle Bearing,' and the other marked 'Defendant's Exhibit, George P. Bent Old Crown Cross-brace Treadle-bearing Sewing Machine,' and state whether or not Mr. Bent exhibited these two treadle-bearing machines to you in his factory, or you there saw them, prior to June 15, 1881.

"A. He exhibited to me the old Crown machine at about that time, prior to June 15, but I cannot remember distinctly whether he showed me the vertical-brace machine at exactly that time, although I remember seeing it about that time.

"Q. 25. Can you fix any date absolutely certain prior to which date you saw this double vertical brace with the treadle hung therein, as shown by this exhibit in Mr. Bent's factory in Chicago?

"A. I am pretty sure that I saw it before May, 1882, some time during the period between June, 1881, and May, 1882.

"Q. 26. Can you swear positively as to this matter?

"A. I think I can, for the reason that in May, 1882, or rather previous to May, 1882, I fell sick and was unable to properly conduct my business, and employed an editor who took charge of the business of the paper and conducted it for at least two years, during which time I had nothing to do with the active conduct of the business, and my recollection is that I saw the machine marked

469 the vertical machine, prior to the time of turning over the business to another, in May, 1882.

"Cross-examination.

"(By Mr. BANNING:)

"X Q. 27. Is this paper offered in evidence marked 'Defendant's Exhibit Sewing Machine Advance, June 15, 1881,' a paper taken from your files, and which you have preserved this last thirteen years?

"A. No, sir.

"X Q. 28. Have you compared it with any copy in your possession or in your files so that you can positively identify it as the paper you published on that date?

"A. I have.

"X Q. 29. How long had you known Mr. Bent before you solicited an advertisement from him?

"A. I had known him several years, I think. Yes, it was several years I had known him.

"X Q. 30. Your paper, at that date, was not entered as second-class mail matter, was it?

"A. I think it was entered from the date of original publication. I bought it from another party, and I am certain it was entered when I bought it.

"X Q. 31. Will you please point in what part of that paper now

before us as an exhibit that such notice is given, as required by law, that it was entered as second-class mail matter?

"A. It is noted on the front page, entered at the post-office at Chicago, as second-class matter.

"X Q. 32. Are you depending now on your memory altogether as regards the dates that you saw those machines, or have you taken occasion to refresh your memory, before testifying?

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"A. I have had to refresh my memory.

"X Q. 33. You cannot fix positively the date or month in which you saw these machines, can you?

"A. No, not to the month, except the one marked the Crown exhibit, which I am certain I saw between the date of my taking possession of the paper in May, 1881, and the date of that issue, June 15, 1881.

"X Q. 34. In your direct testimony you did not mean to say that you saw these machines that are now on exhibit, but rather machines embodying the same ideas; is that correct?

"A. That is correct.

"X Q. 35. Have you ever been engaged in the manufacture of sewing machines?

"A. I have.

"X Q. 36. Will you please state when and where?

"A. I was a member of the firm of Scates, Tryber & Sweetland, for nearly two years, they were engaged in the manufacture of sewing machines here in the city of Chicago during that time; that is, I was a member of the firm from January, '79, to November, '80—23 months.

"X Q. 37. Was that the extent of your connection with the manufacture of sewing machines?

"A. That was the only time that I was ever personally connected with a manufacturing firm as a member of the firm.

"X Q. 38. Did your duties during that time lead you to take notice of, or take any practical part in the manufacture of the machines?

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"A. My duties were in the office, but I did a great deal of inspection of the finished machines, having found out that they were faulty, and become dissatisfied with their performance after being sold.

"X Q. 39. Did you manufacture the whole machine, or only the head?

"A. We manufactured only the head.

"X Q. 40. You rarely, if ever, then paid any attention to the standard?

"A. We had to pay considerable attention to the stand.

"X Q. 41. Then you sold the machine complete.

"A. Yes, sir.

"X Q. 42. Regarding the exhibit marked 'George P. Bent Old Vertical-brace Treadle-bearing,' you cannot fix positively any date before May, 1882?

"A. No, sir.

"Redirect examination:

"R. D. Q. 43. But you can fix positively the fact that you saw this machine last inquired of prior to May, 1882?

"A. That is my recollection."

(Signed) WALTER SCATES.

Mr. KALLOCH: The next testimony is taken on November 5, 1894, the witness being FRANK B. DAVIS, and is as follows:

"Direct examination.

"(By Mr. OFFIELD:)

"Q. 1. Please state your name, age, residence and occupation.

"A. My name is Frank B. Davis; age, 55; residence, Chicago; occupation, manufacturer.

472 "Q. 2. What is the name of your firm?

"A. Mason & Davis Company.

"Q. 3. How long have you been engaged in the foundry business at Chicago, Illinois?

"A. Since 1873.

"Q. 4. Where was your foundry in Chicago, Illinois, during the year 1881?

"A. Grand Crossing, part of the year, and the rest of the year at 347 Illinois street.

"Q. 5. What time did you move your foundry and business in the year 1881 from Illinois street to Grand Crossing?

"A. November.

"Q. 6. How far is Grand Crossing from Illinois street?

"A. About 11 miles.

"Q. 7. Do you know Mr. George P. Bent, a sewing-machine, piano and organ manufacturer of this city?

"A. Yes, sir.

"Q. 8. How long have you known him?

"A. About twenty years.

"Q. 9. Did you do any work for him at your foundry in Illinois street during the year 1881, and prior to your removal in November?

"A. Yes, sir.

"Q. 11. What particular work did you do for him?

"A. Sewing-machine stands.

"Q. 12. What work did you do as to Mr. Bent's sewing-machine stands during 1881?

"A. We made the castings and japanned them and fitted them up.

"Q. 13. Please look at the sewing-machine stand that I now show you and marked 'Defendant's Exhibit George P. Bent Old Vertical-brace Treadle-bearing Sewing Machine,' and state whether

473 that is one of the stands, or exactly like one of the stands, made by you for Mr. Bent at Illinois street, prior to your removal therefrom, in November of the year 1881?

"A. I should say it was.

"Q. 14. Did you ever make or have any sewing-machine stands for Mr. Bent at the Illinois Street foundry after you left there in November, 1881?

"A. No, sir."

(Signed) FRANK B. DAVIS.

"Cross-examination.

("By Mr. BANNING:)

"X Q. 15. Were the machines you made castings of cast from patterns similar to those in exhibit in this case?

"Yes."

Mr. KALLOCH: The next testimony was taken on November 5, 1894, the witness being WILLIAM WALMSLEY, who, on direct examination by Mr. Offield, testified as follows:

"Q. 1. State your name, age, residence and occupation.

"A. My name is William Walmsley; I am 45 years old, and reside in La Grange, Cook county, Illinois; business, real estate broker.

"Q. 2. Were you ever in the employment of the Singer Manufacturing Company, and if so, in what year, and when did you leave their employment?

"A. I was in the employment of the Singer Manufacturing Company from the summer of 1875 to the summer of 1885.

"Q. 3. What years in Chicago?

474 "A. From the 1st of October, 1879, to September, 1885. I was branch manager of an office on the corner of Van Buren and Halsted street from 1879 to 1883, and city manager from that time until September, 1885.

"Q. 4. Do you know Mr. George P. Bent, a sewing-machine, piano and organ manufacturer of this city, and if so, how long have you known him?

"A. Yes, sir; I have known him about since 1875; from that time on. In fact, I knew him when he was with David C. Cook.

"Q. 5. Did you ever buy a sewing machine of George P. Bent in this city, at his place of business here, and if so, when, and for what purpose?

"A. I bought a sewing machine from George P. Bent at 81 Jackson street some time in the winter of 1881. I bought it at the request of the Singer Manufacturing Company, as I understood they wanted to use it in evidence in a case brought by them.

"Q. 6. Patent case, do you mean?

"A. Yes, sir, something like that.

"Q. 7. On a tension device?

"A. Yes sir.

"Q. 8. Please look at the sewing machine now shown you and marked 'Defendant's Exhibit, George P. Bent Old Vertical-brace Treadle-bearing Sewing Machine,' and state whether or not that is the machine, or a duplicate of it, you purchased of Mr. Bent in this city in the year 1881?

R. J. Cranmer et. al.
Chief Circuit
Northern Dist. California

(Herman Cranmer
v.
Hicks B. Fry

Defendant's Exhibit 17 Cranmer

SEE THE TESTIMONY

As to the Merits of the N. Y. Singer.

E. A. Sharman, U. S. Commissioner.

HUNDREDS OF OTHERS HAVE BOUGHT AND SOLD THEM, AND FIND THEM MOST SATISFACTORY. TRY THEM AND BE CONVINCED.

A trial order is sure to lead to others.

MARTIN MILLS, Tenn., April 24, 1878.

MR. GEO. P. RENT:—Send me the machine and it is all my mind will be. If it will take the agency at once. I am glad to hear from you soon and get forward please. Respectfully yours, JAMES G. ——.

MONTGOMERY, Ill.

The machine has been in steel, everything satisfactory. It is the finest running machine I have seen. P. C. LUTHER.

MACPHERSON, Lee Co., Miss., April 4, 1878.

The sewing machine No. 21 ordered of you comes here to-day and is received, tested, and given my satisfaction. W. A. PAGE.

ILLSBOROUGH, Ill., June 10, 1878.

DEAR SIR:—Machine came safely to hand last Thursday. Must say that I was more than satisfied with it. It far surpassed anything I expected it to be. Mrs. JOHN ALEXANDER.

CRYSTAL POINT, Texas., February 28, 1878.

MR. GEORGE P. RENT:—In regard to the sewing machine I bought from you. I am well pleased with it. It is very pretty and runs very easy. F. MCKEE.

ST. JOHN, Wis., March 1, 1878.

DEAR SIR:—I think it but just for me to say that the machine, which I ordered of you, is all you could recommend it. I was more than surprised when I received it. Will be pleased to recommend it to my friends, and will say that whoever has need of a machine, I believe, I cannot truly. ERIC O. PETERSON.

GEO. P. RENT, Esq.

ATHENS, O., Aug. 8, 1877.

DEAR SIR:—Received and do do it is pleased to Singer machine to hand. I like it and all that I have used it for it does come and gives good satisfaction. If the rest of the work we expect it to the end we ever saw. Very truly, KUNKEL & MOORE.

LOCHARBER, Ia., November 10, 1877.

At last the Singer machine arrived. August 21, 1877, but came to hand, ten days after. Its general appearance, within five days of receipt, and has given entire satisfaction, and will positively last to admiration. I order from me. R. B. SCOTTON.

NEW RIVER, Ala., January 27, 1878.

MR. GEO. P. RENT:—The no stitches I received have given me a look of no satisfaction. Don't think they are the best. Respectfully yours, R. B. ——.

The machine seems to hand of right best Saturday. You have to look of with it. Every one who sees it likes it. F. ——.

FRAZIER CITY, Ia., January 8, 1878.

DEAR SIR:—The machine that I purchased of you a short time ago, is a perfect beauty, and was named by all as the finest. I want you to send me another one, say to No. 9 Singer. I intend to send again before long. Yours, ——.

RAVEN RAPIDS, Mich., January 8, 1878.

I will send you in an order for two No. 9's in a short time. Your's have work to perfection, better than the C's have. DANIEL ——.

MANCHESTER, Ia., November 13, 1877.

GEO. P. RENT:—I purchased from you of me a year ago a N. Y. Singer. It has run every day since, and is yet sound, and has not lost the motion of the first day. I am satisfied with it. Yours, ——.

GRIFFIN STATION, Ky., Oct. 17, 1876.

My sewing machine has ere out all right, and works like a charm. Yours, ——.

NEWBURY, N. Y., December 11, 1876.

SIR:—I am glad to say that the machine had arrived all right, and I am well pleased with it. If the contents I expectation to be upon receipt. Yours, ——.

INDEPENDENCE, Ia., ——.

Machine and your letter year and the contents all right. It is much pleased with it. Yours, ——.

No. 9.

N. Y., "SINGER" MODEL, SEWING MACHINE.

The Various Styles of N. Y., "Singer" Model, Machines are as follows:

		Cash Price.
No.	1—Is a latest improved head, highly ornamented,	
	pattern as improved stand, and is made in the finest	$60.00
No.	2—Is the same as No. 1, with the addition of a finely	
	veneered and ornamental bronze cover for the head,	55.00
No.	3—Has the same head and stand, with table having	
	drop leaf, cover, and case of two side drawers, all hand-	
	somely veneered and ornamented. This is the most popular and	50.00
No.	4—Is the same as No. 3, with the addition of another	
	case of two drawers at the right of	55.00
No.	5—Has same head and stand, but a table with a	
	drawing cover finely veneered and panelled, with large	
		60.00
No.	6—Is the same as No. 5, with the addition of a drop	
	leaf and a case of two drawers at each end, all handsomely	
		65.00
No.	7—Is a "three-quarter" cabinet case, finely veneered	
	and panelled, case of two drawers at right, with drop lea-	
		60.00
No.	8—Is the same as No. 7, with folding treadle of best	
		55.00
No.	9—Is a "full" cabinet case, with case of side drawers	
	elegantly veneered and finished in ornament, double covers,	
		65.00
No.	10—Is the same as No. 9, except that it has a folding	
	treadle of best pattern	60.00
No.	11—Is the same as No. 9, except that it is extra fancy	
	veneer and finish, most elegant in every respect	75.00
No.	12—Is the same as No. 10, except that it is designed	
	and designed in the most superb manner, handsome as	
		75.00
No.	13—Is the same as No. 9, except that it has a case of	
	three side drawers instead of two	77.00
No.	14—Is the same as No. 4, except that it has cases of	
	three drawers each instead of two	65.00

A Swing Drawer for the center of the table will be supplied for any style, if desired.

The following Extras free with each machine:—1 Hemmer, 1 Feller, 1 Braider, 1 Gauge, 1 Screw-driver, 1 Oil-can, 1 Thread-cutter, 1 Presser-foot, 1 Needle, 1 Oil Can filled with oil, 12 Needles, 1 Screw-driver.

Extra Attachments for following, to come:—Tucker, $2; Binder, $2; Corder, $1; Set of Hemmers and Braid, $1.75; Thread cutter, 50c.

GEO. P. RENT, JOSLIN, 81 & 83 JACKSON ST., CHICAGO.

Branch Houses, Kansas City, Mo.

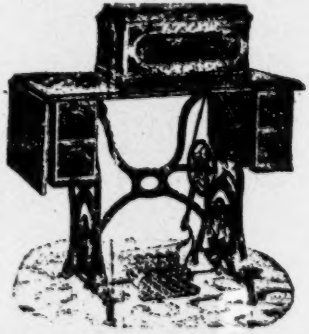
4477

1963

New York, "Singer" Model, Sewing Machine.

STYLE NO. 2.

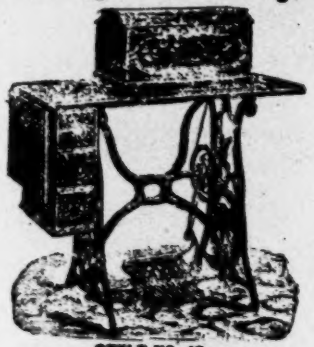
Cash Price.....$41.00. Time Price.....$45.00.



STYLE NO. 4.

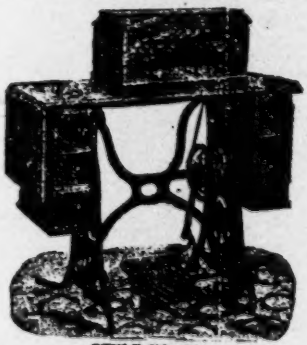
Cash Price.....$ Time Price.....$

New York, "Singer" Model, Sewing Machine



STYLE NO. 13.

Cash Price.....$37.00 Time Price.....$47.00



STYLE NO. 14.

Cash Price.....$ Time Price.....$

475 "A. I can't say that it is the identical machine, but it is a duplicate of it.

"Q. 9. What time in the year 1881 was it? Give the month, if possible, that you bought this machine of Mr. Bent.

"A. I can't remember the exact date, but it must have been in the fall or early winter of 1881.

"Q. 10. What do you mean by early winter of 1881?

"A. It must have been not later than November, some time before, but not later than that.

"Q. 11. How do you know this fact?

"A. Because I had been looking up the matter, and I know that it was previous to the appointment of Mr. McDowell as city manager, and during the time Henry McCall was city manager of the company.

"Q. 12. How do these facts fix the date of purchase of this machine as 1881?

"A. From the fact that Mr. McCall requested me to purchase the machine, and that was while he was city manager, previous to his retirement, as city manager, and he retired in January, 1882.

"Q. 13. At the time you visited Mr. Bent's establishment and purchased this machine in 1881, do you remember if you got a circular of him, of this machine?

"A. Yes, sir.

476 "Q. 14. Is this it?

"A. It is like it; I can't say it is the identical circular, but I believe it is.

"Defendant's counsel here offers in evidence the circular identified by the witness, and requests that the same may be marked 'Defendant's Exhibit, Bent 1881 Circular.'"

(The circular referred to was here shown to the jury, the following being a photographic copy thereof:)

(Here follow photographs marked pp. 477 & 478.)

479 "Cross-examination.

"(By Mr. BANNING:)

"X Q. 17. You have testified that this exhibit marked 'George P. Bent Vertical Brace' is similar to or a duplicate of the machine you purchased in 1881. Did you pay particular attention to all the parts of that machine, so that you can safely say that it is identical in all respects?

"A. I paid particular attention to the machine, because I was requested to do so. The original machine that I purchased I marked with some private marks in the presence of Mr. McCall, the city manager, and he also remembers the fact of the purchase of the machine and the marking of it, and I paid particular attention to the tension and the stand.

"X Q. 18. What do you mean by the 'tension'?

"A. I mean the device for regulating the stitch.

"X Q. 19. Is the cross-back bracket in all respects identical with the machine you purchased? I mean the cross-brace.

"A. Yes, I believe it is.

"X Q. 20. Are you certain of it?

"A. Well, I think there is no question of it in my mind at all.

"X Q. 21. Is the manner of hanging the driving pulleys or balance pulleys the same as on the machine you purchased?

"A. I think it is.

"X Q. 22. I want to know whether you are absolutely certain of it or not.

"A. Well, I am certain that that is like it.

"X Q. 23. How long since you have seen this machine that you purchased?

"A. I saw it last Friday."

(Signed) WILLIAM WALMSLEY.

480 Mr. KALLOCH: The next testimony is taken on November 13, 1894, deposition of JOHN G. ELLIOTT, who testified as follows:

"Q. 1. Please state your name, age, residence and occupation.

"A. John G. Elliott; age, 43; patent lawyer and solicitor.

"Q. 2. How long have you followed your profession continuously at Chicago, Illinois?

"A. Over fifteen years.

"Q. 3. Were you the attorney for the June Manufacturing Company in the suit brought against them by the Singer Manufacturing Company in the U. S. circuit court for the northern district of Illinois, in January, 1883, for an infringement of their alleged trade name, Singer?

"A. Yes, sir.

"Q. 4. Did you draw and file the answer in that case?

"A. The answer was drawn by Mr. William Henry Brown, of Washington, D. C., who had been retained with me in the suit at my solicitation.

"Q. 5. Was there another case begun at that time, against George P. Bent of this city, by the Singer Manufacturing Company, covering exactly the same subject-matter of contention?

"A. Yes, except as to slight differences in the ornamentation of the Bent machine as compared with that of the June Manufacturing Company, but not as to the main contention, on the part of the Singer Manufacturing Company, for the monopoly of the name Singer as a trade-mark and trade name when applied to sewing machines.

"Q. 6. Were the two cases, namely, the case of the Singer
481 Manufacturing Company against the June Manufacturing Company, and the same company against George P. Bent, run together, at least, to the extent of the testimony taken being applicable to both cases and the cases argued together?

"A. Yes.

"Q. 7. Do you remember the number that appeared on the plate

of the sewing-machine head of the June Company's machine, introduced in evidence in that case?

"A. The number on the Complainant's Exhibit, Defendant's Machine in that case, and now before the U. S. Supreme Court in Washington, is 2,543,707.

"Q. 8. Do you remember when that machine was purchased of the June Company?

"A. No, because it was no doubt purchased by the complainant, and I have no means of knowing just when they did purchase it.

"Q. 9. Was there any date fixed in that case by Mr. June, president of the June Company, or anything in that record which showed when the machine was purchased or made?

"A. During the examination of Mr. June in that suit, he was referred to the fact that the number on Complainant's Exhibit Defendant's Machine therein was 2,543,707, and then asked about how many sewing machines of this pattern had the June Manufacturing Company made, prior to April 5, 1882, when this machine was purchased. Mr. June's answer was, 'I think the Standard Manufacturing Company and the June Manufacturing Company both had made about 3,700 machines up to that time, and in this connection I may
482 add, by way of explanation, that the June Manufacturing Company was the successor of the Standard Manufacturing Company.'

"Q. 10. How did it happen that the June Manufacturing Company in 1882 placed such high numbers, up into the millions, on their machines, when, as a matter of fact, they had only made 3,700 machines?

"A. I had asked this same question of Mr. June before his examination in that case, and in question 12 of that examination I put to him the following question: 'I observe in the base plate of Complainant's Exhibit, Defendant's Machine, the number 2,543,707. Please state why so large a number is used on that machine?' His answer was: 'I asked Mr. Hughes, whose business the Standard Manufacturing Company purchased and carried on, this same question, and his answer was that nearly all the sewing-machine companies prefixed three figures before the actual number of machines they had manufactured, and that he had done the same. Inasmuch as this was the fact, I thought I would not make any change in the the custom.' This was practically the same answer that Mr. June gave me previous to the examination as to that number.

"Q. 11. Then the last four figures of Mr. June's number represented the actual manufacture of his machines?

"A. Yes, he so testified, as I before stated."

(Signed) JOHN G. ELLIOTT.

Mr. KALLOCH: That concludes the depositions.

483 HERMAN CRAMER, recalled, for defendant, testified as follows:

Mr. WHEATON: In your case against Willis B. Fry you were called as a witness and gave testimony, did you not?

A. Yes, sir; that is correct.

Q. Mr. Cramer, take this and read from page 33, where that line crosses, to page 36, where that line crosses. After you have read it through, you will then be asked as to whether or not that is a correct transcript of the testimony you delivered at that time?

A. I have read that.

Q. Do you recollect giving that testimony on that trial?

A. I do not. Not in that way.

Q. Mr. Cramer, I will read you the first question and answer, and ask you if that is correct.

"Q. When did you make the thirty-five machines that were made with the device as described in your patent?

"A. When did I make them?

"Q. Yes.

"A. Before 1882. Before May, 1882."

Q. Did you give that testimony?

A. That is a mistake; I don't remember; I could not tell.

Q. You do not know?

A. No, sir, not now.

Q. The next question and answer are as follows:

"Q. Have you made any of them since 1882?

"A. I have."

Is that correct?

A. I cannot tell whether I delivered that testimony or not.

Q. The next question and answer is as follows:

"Q. How many had you made in all in which you had the treadle with knife-shaped trunnions cast onto it?

484 "A. How many altogether?

"Q. Yes.

"A. About thirty-five."

Q. Did you give that testimony?

A. Likely; I guess so.

Q. The next question and answer is as follows:

"Q. How many of these were made since 1882?

"A. Since 1882? The bulk of them were made in 1883. Three of them were made before 1882."

Q. Did you give that testimony?

A. Likely; yes, I think so.

Q. The next question is as follows:

"Q. Three of them were made before the month of May, 1882?

"A. Yes, sir."

Q. Did you give that testimony?

A. Yes, sir.

Q. Next:

"Q. When was the first one of them made?

"A. When was the first one made?

"Q. Yes.
"A. Perhaps they were two or three or four weeks apart."
Q. Did you give that testimony?
A. Likely. I don't remember, but likely.
Q. The next question is:
"Q. The first one, then, was made about the month of February, 1882?
"A. February, 1882?
"Q. Yes.
"A. No, sir; it was made before that; before May."
Q. Did you give that testimony?
A. Likely, I don't remember.

The COURT:

Q. What is your best recollection as to whether you gave that testimony or not?
485 A. They asked me when the first castings were made, or something of that kind; and, in answer to that, it was given as near as I can remember, castings at the foundry.

Mr. WHEATON:

Q. The next question is:
"Q. When was the first one made?
"A. Before May, 1882. If the time is very essential, I have the receipt of the foundry there with me."
Q. Did you give that testimony?
A. Yes, sir, I remember that part.
Q. Next:
"Q. Please look at it and see when you first commenced making the first one of those devices.
"A. I have not the Sonora Foundry receipt here. I have some San Francisco receipts here."
Q. Did you give that testimony?
A. I think so, I remember about the receipts.
Q. Next:
"Q. I want the first one that you made.
"A. That I have not got here, but I am very positive it was before May."
Q. Did you give that testimony?
A. Yes, sir; of course it was before May.
Q. "How long after that did you have the one made in San Francisco?
"A. May 24, 1883."
Q. Did you give that testimony?
A. I presume I must have taken that from the receipts.
Q. Did you give that testimony?
A. I think so.
Q. Next:
"Q. That is the first one you had made in San Francisco?
"A. That is a lot I had made in San Francisco."
Q. Did you give that testimony?

486 A. I presume I must have taken that from the receipts.
Q. Did you give that testimony?
A. I think so.
Q. Next:
"Q. That is the first one you had made in San Francisco?
"A. That is a lot I had made in San Francisco."
Q. Did you give that testimony?
A. As near as I can remember, yes.
"Q. Had you had three made before that?
"A. Yes, sir, in Sonora."
Q. Did you give that testimony?
A. Yes, sir.
Q. "Q. Who made the castings for you in Sonora?
"A. The Sonora foundry."
—. Did you give that testimony?
A. That is correct.
Q. "Q. Is that Patterson's foundry up there?
"A. Yes, sir; it was not Patterson's at that time."
Q. Did you give that testimony.
A. Yes, sir.
Q. "Q. To whom did you sell the machine that had the first one of these combinations in it that you put in in Sonora county?
"A. I could not tell positively who they were; who got *haps* Dr. Gould. I am not positive who the first ones were."
Q. Did you give that testimony?
A. I don't remember about giving that.
"Q. Who got the three machines that you made there in which you put in this combination?
"A. I could not tell positively who they were; who got the first three machines out."
Q. Did you give that testimony?
487 A. I could not tell about that.
"Q. Don't you know what you did with those three first machines?
"A. Why I sold them."
Q. Did you give that testimony?
A. Likely. I don't remember about the testimony there.
"Q. Cannot you tell who you sold them to?
"A. I could not tell whether they were the three first ones or this lot. I could not tell that."
Q. Did you give that testimony?
A. I don't remember.
"Q. How long were you making those three machines in Sonora?
"A. They were cast in one day. You can only get cast one in a week."
Q. Did you give that testimony?
A. No, sir; I am positive of that part, that they never did cast one in a day.

The COURT:

Q. The question is, did you so testify?

A. It is not likely that I would testify that they were cast in one day, when I knew that they were not cast in one day.

Mr. WHEATON:

"Q. How long did it take you to put them together and test them after they were cast?

"A. A few minutes."

Q. Did you give that testimony?

A. Yes, sir.

"Q. Tell us as near as you can when you made the first one of those combinations?

"A. It was before May, 1882."

Q. Did you give that testimony?

A. Not in that way. It was referring to the casting; when
488 I had the first one cast before May. I did not tell you how long before May.

Q. The court asked a question then:

"Q. When do you mean by that? Was it in 1882? One of the months before the month of May?

"A. Yes, sir, before the month of May."

Q. Did you give that testimony?

A. Yes, sir.

"Q. But in 1882?

"A. Yes, sir."

Q. Did you give that testimony?

A. When it refers to the casting, whether I had it made, or which I made myself, those that I made myself in the workshop, I had not them made. These are the ones I had made.

Afternoon session.

APRIL 6TH, 1900.

Mr. WHEATON: If your honor please, Mr. Bennett has to go into another court, I understand, and I would like to prove this record by him at this time, withdrawing Mr. Cramer, with your honor's permission.

CLEMENT BENNETT, called for the defendant, was sworn and testified as follows:

I am the United States official reporter. I believe, by courtesy of Judge Morrow, I am the official reporter of this court. I recollect a case that was tried in this court in which Mr. Herman Cramer was plaintiff, and Mr. Willis B. Fry was defendant. I took part of the testimony in that case.

Q. Will you please look at this transcript of testimony that I now show you, and state what that is?

489 A. That is a transcript of the proceedings and testimony in that case.

Q. Does that contain a transcript of testimony given by Mr. Herman Cramer on that trial?

A. Yes, sir.

Q. Did he give the testimony which is shown in that transcript at that trial?

A. Yes, sir.

Q. Is that a correct transcript all the way through of the testimony taken and what was done on that trial?

A. Yes, sir.

Q. This transcript includes a statement of counsel made to the jury on the opening of that trial. Was that statement made as shown in this transcript?

A. Yes, sir. I presume it is, if it is there. That is a transcript of my notes. I took the statement down as it was given at the time in shorthand. This transcript includes a correct translation or transcript of those notes put into typewriting. My typewriters were first-class typewriters, and they made no mistakes, as a rule.

Testimony of Herman Cramer.

Direct examination (resumed).

Mr. WHEATON:

Q. Mr. Cramer, the next question and answer contained in this transcript which I am reading from are as follows:

"Q. Was it before the month of March, 1882?

"A. I could not tell you positively what month it was, only it was before that time. I applied for a patent in May, 1882, and I had a model, a complete working model, at the attorney's; a large-sized working model."

Did you give that testimony?

A. Yes, sir, I remember that.

490 Q. The next question is: "Were the drawings made from that model which your attorneys then had?

"A. No, sir."

Q. Is that correct?

A. That is correct.

"Q. Can you tell whether you had made one of those combinations before the month of March, 1882, or not?

"A. The probability is that they were made before March."

Q. Is that correct?

A. What do you mean by that. I want to understand that.

Q. I mean, did you give this testimony on that trial?

A. But do you mean the castings, or do you mean——

The COURT (interrupting): No, Mr. Cramer. Do not confuse this testimony with the fact that you may have in your mind. The question is, did you give that testimony on the former trial.

The WITNESS: Please state it over again.

Mr. WHEATON:

"Q. Can you tell whether you had made one of those combinations before the month of March, 1882, or not?"

The COURT: That was the question that was asked you at the

former trial. Mr. Wheaton will now read to you what purports to be your answer. The question is, is it correct?

Mr. WHEATON:

"A. The probability is that they were made before March."

Q. Did you give that testimony?

A. The probability is—or, I will say, I knew——

The COURT (interrupting): The question is, Mr. Cramer, did you give *that testimony? Did you so testify?*

A. I could not tell, as to the probability.

491 Q. Did you give that testimony, is the question?

A. That they were made before March?

Q. That testimony, as read. That record shows that you so testified.

A. That they were made before March?

Q. Yes.

A. Yes, sir—oh, yes.

Q. And you did so testify?

A. Yes, sir.

Q. Not whether that is true or not, but did you so testify?

A. To the best of my recollection.

Q. That applies to all of these trunnions and all of these answers. It is as to whether or not you did so testify at the former trial, not whether it is true or not.

A. To the best of my knowledge I so testified, that they were made before March.

Mr. WHEATON:

"Q. Can you tell for certain whether they were or not?

"A. I cannot."

Q. Is that correct?

A. No, sir; I don't know anything about that, unless he referred to the castings.

Cross-examination of HERMAN CRAMER.

Mr. MILLER:

Q. Mr. Cramer, the counsel has been reading to you some questions and answers that occurred in the old case of Cramer *v.* Fry, in which some questions were asked you regarding the time when you made the combinations therein referred to, and also regarding the time when you made three certain machines embodying your invention; what did you understand those questions to refer to?

492 A. The castings which were cast at the foundry. When I had them made at the foundry; not those that I made myself, but when I had them made. That is what I understood by it. I had some castings made at the Sonora foundry; in 1881 one was made, and between that and this present time six or seven have been made altogether, perhaps eight. But there were three made, as near as I can tell, that year.

Q. He was referring here to three castings?

A. Those I had special receipts of, of those three machines, and I tried to produce them here in court, and I went to the foundry and I consulted with Mr. Shepherd to get that first receipt, and I could not get those receipts.

Q. He read to you this question that he asked you on the former examination: "Tell us as near as you can when you made the first one of those combinations. A. It was before May, 1882." What were you referring to there?

A. That is the first one--the first combination was made long before that. That I did not have made; I made that myself. There were three of them that I had in my shop, from which I selected my patent.

Q. When was it you made the one finally embodying your patent?

A. That was all built and finished about the middle of June, 1880. I made it from old castings, from an old machine.

Q. What is this brace?

A. That is the identical casting. It come from one of the old machines.

(The casting referred to was here introduced in evidence and marked Plaintiff's Exhibit "X.")

493 Q. You say you got it from an old machine?

A. One of the old machines that I had in my shop. I made a complete machine at that time. I sawed off the bottom, and then put on the pieces like that, and then put on this lower bearing on this vertical double brace, like that (showing). Then I took, I think it was an old treadle with trunnions that worked on the leg on each side—I took and sawed that off so as to work in that. In that way I made that machine, and worked it in my shop. I had it built about the middle of June; in the month of June, 1880.

Q. So that this brace which you now produce is the actual one that you used in the first machine?

A. Yes, sir; that is the one I used in the first machine.

Q. What are those small holes down in the end of the brace?

A. That was to fasten the piece I had on here—fasten it on both sides. I did that, and then I cast the bearings in there with babbitt. Afterwards I took this brace, and I put a piece right in the middle, so as to put on the word "Patented," and made that so as to cast with a core. The foundryman told me the best way to do that was to cast it with a core, in place of two pieces.

Q. What became of the two pieces that were on the ends of this brace, that carried the bearings of this treadle?

A. I don't know what became of them. I had them at the first trial in a box, and they were all mashed together in a box and shipped to Stockton. They were mashed up, and I don't

494 know what became of some of them. It took me three weeks to find out where my castings went to. Among other things, I found these castings.

Q. Then, as early as June, 1880, you took this brace out of an old sewing machine?

A. Yes, sir; I cut off the ends of the vertical brace down there, and bored holes through there, and on the ends attached bearing pieces for that treadle, and then took an old treadle with knife-edges on it and mounted it on that brace, and made a sewing machine in that way, as early as June, 1880. I had it all complete. I set it up and operated it in my shop.

Q. After you had done that, what was the next thing you did with regard to making any machine?

A. The next machine I took to the foundry and asked them whether they could cast it that way, and they thought it best to cast it with a core box in place of two pieces. They said the core box would be the best, and so I made a core box, and I had one casting made with a core box, and so on, another and another. The first one was cast, I think, the record of it was January, 1881. I have it accurately on that paper, if you want to be right certain of it. But I am pretty certain of it, come to think. That was at the Sonora foundry. I had one cast at that time.

Q. When were the next ones that you had cast?

A. I could not tell without the receipt there, but they were some two or three months apart, I should judge. I could not tell without the receipts. The attorneys had the receipts, and I don't know what became of them. That was in 1881. And I think I had some cast in 1882. I think they were perhaps two or three months apart,
495 something like that. I could not tell the exact date when those particular ones were cast; not now I could not.

Q. Now, referring to those three machines that were cast in Sonora, in this former testimony which has been given here, you were asked to tell as near as you could when the first one was made, and you say it was before May, 1882. Then you were asked whether it was in the year 1882, and you answered yes. What did you refer to there?

A. To the castings that were made at the Sonora foundry.

Q. You did not pretend to refer to the time when you made the invention, did you?

A. No, sir; I did not intend to refer to the models I made myself. When I was asked where I had the first one made, I referred to those I had made by others. I referred to the castings which I had made by others.

Q. You were asked in that case, it seems, when you made the thirty-five machines that were made and sold by you, and you were also asked whether that was before May, 1882, and it appears that you said that was before May, 1882.

A. That is a mistake. I know that is a mistake.

Q. What is the mistake?

A. Well, that lot of castings were made in 1883. They were made subsequent to the castings that were made in Sonora. The castings made in Sonora were prior to May, 1882. I had the three machines made that I sold. After that, I had castings made down

here in the city. I had a lot made. That was the thirty-five
496 or forty that I have referred to. They were made here at the O. K. foundry on Main street. If this testimony appears to make it that the thirty-five or forty machines that I had made here at the O. K. foundry were made prior to 1882, that is a mistake.

Mr. WHEATON: If your honor please, I now offer in evidence the testimony that has been referred to in the direct examination of Mr. Cramer.

(The testimony referred to was here introduced in evidence, marked Defendant's Exhibit No. 4, and read to the jury, the following being a copy thereof.)

"Q. When did you make the thirty-five machines that were made with the device as described in your patent?

"A. When did I make them?

"Q. Yes.

"A. Before 1882. Before May, 1882.

"Q. Have you made any of them since 1882?

"A. I have.

"Q. How many had you made in all in which you had the treadle with knife-shaped trunnions cast onto it?

"A. How many all together?

"Q. Yes.

"A. About thirty-five.

"Q. How many of those were made since 1882?

"A. Since 1882? The bulk of them were made in 1883. Three of them were made before May, 1882.

"Q. Three of them were made before the month of May, 1882?

"A. Yes, sir.

"Q. When was the first one of them made?

"A When was the first one made?

"Q. Yes.

"A. Perhaps they were two or three or four weeks apart.

497 "Q. The first one, then, was made about the month of February, 1882?

"A. February, 1882?

"Q. Yes.

"A. No, sir, it was made before that; before May.

"Q. When was the first one made?

"A. Before May, 1882. If the time is very essential, I have the receipt of the foundry here with me.

"Q. Please look at it and see when you first commenced making the first one of those devices.

"A. I have not the Sonora Foundry receipt here. I have some San Francisco receipts here.

"Q. I want the first one that you made.

"A. That I have not got here, but I am very positive it was before May.

"Q. How long after that did you have the one made in San Francisco?

"A. May 24, 1883.

"Q. That is the first one you had made in San Francisco?
"A. That is a lot I had made in San Francisco.
"Q. Had you had three made before that?
"A. Yes, sir; in Sonora.
"Q. Who made the castings for you in Sonora?
"A. The Sonora foundry.
"Q. Is that Patterson's foundry up there?
"A. Yes, sir; it was not Patterson's at that time.
"Q. To whom did you sell the machine that had the first one of these combinations in it that you put in in Sonora county?
"A. I could not tell you who the first one was. Perhaps Dr. Gould. I am not positive who the first ones were.
498 "Q. Who got the three machines that you made there in which you put in this combination?
"A. I could not tell positively who they were; who got the first three machines out.
"Q. Don't you know what you did with those three first machines?
"A. Why, I sold them.
"Q. Cannot you tell who you sold them to?
"A. I could not tell whether they were the three first ones or this lot. I could not tell that.
"Q. How long were you making those three machines in Sonora?
"A. They were cast in one day. You can only get cast one in a week.
"Q. How long did it take you to put them together, and test them after they were cast?
"A. A few minutes.
"Q. Tell us as near as you can when you made the first one of those combinations.
"A. It was before May, 1882.

"The COURT:

"Q. What do you mean by that? Was it in 1882? One of the months before the month of May?
"A. Yes, sir; before the month of May.
"Q. But in 1882?
"A. Yes, sir.

"Mr. WHEATON:

"Q. Was it before the month of March, 1882?
"A. I could not tell you positively what month it was, only it was before that time. I applied for a patent in May, 1882, and I had the model, a complete working model, at the attorney's; a large-sized working model.
"Q. Were the drawings made from that model which your attorneys then had?
"A. No, sir.
499 "Q. Can you tell whether you had made one of those combinations before the month of March, 1882, or not?
"A. The probability is that they were made before March.

"Q. Can you tell for certain whether they were or not?
"A. I cannot."

C. A. HAWKINS, called for the defendant, was sworn and testified as follows:

I am the general agent for the White Sewing Machine Company at No. 300 Post street.

Q. With how many different styles of sewing machines have you been intimately acquainted for a good many years last past?

A. I think pretty nearly everything constructed and sold, to amount to anything, in the market. I have lived in San Francisco a little over two years. I traveled five years in Texas as general agent for the southwest. Before that I traveled in western New York and Pennsylvania, selling sewing machines.

Q. For how many years did you make and sell machines before ball bearings were adopted, in which the treadle was hung in cones on the tie-rod?

A. I think about twenty years.

Q. In what quantities was that White machine sold with that style of hanging the treadle in the cones on the tie-rod?

A. I think there were about eleven hundred thousand sold.

Mr. MILLER:

Q. Are you testifying from your own knowledge now, or simply testifying from hearsay?

500 A. Well, I have been connected with the business for the past ten years, about, as I say, with the White Company.

The COURT:

Q. You did not sell one million one hundred thousand machines yourself?

A. I have been actively connected with the general office, and in a position to know what was sold. I do not sell any, sir. I have travelers who do that. They are under my direction.

Q. How many do you know, yourself, of having been sold under your direction?

A. You mean since I went with this company?

Q. Yes.

A. I would have to estimate it. Probably twenty-five thousand, in ten years.

Mr. WHEATON:

Q. What position did you hold during that time, with the company that was making and selling these White machines?

A. Part of the time I was traveling over a limited territory, part of the time I was traveling at large, and part of the time I was general agent for the southwestern territory, and that figure is the number that has been sold directly under my supervision—or just an estimate of it.

Q. For how many years, if at all, has that White machine been sold in competition with the Singer machine?

A. I think they have both been on the market side by side ever since the White machine was made. That was in 1876.

Q. Please state what trouble, if any, you had with the set-
501 screws getting loose and the cones getting out of place.

A. We have never had any trouble at all with them, so far as their working is concerned. I have never had any complaint about it. We may have somewhere, in long hauls, the set-screws might work loose and the cones may have got a little out of place one way or the other, but it is only a matter of a moment to tighten them up. I have never had any complaint of that kind, although I say I think that a possibility.

Q. Have you done any repairing of those White machines yourself, or superintended it?

A. I have not, in recent years. When I first went into the business, I did.

Q. Can you tell whether it would be possible for the treadle bearings of the White machine, when they are hung in cones, to get out of alignment with each other, even if both cones were moved out of place, and the treadle left resting on the bar alone?

A. That would be impossible, because they are both set on the same rod, and the rod is perfectly straight.

Q. Are both of the treadle bearings and the treadle in one solid casting—that is, the treadle itself?

A. They always have been until the ball bearings came in. They insert a cone now.

Q. But where the two bearings are both in the old solid casting, would it be possible for those bearings to get out of alignment with each other, I mean, as the treadles always have been put in, where they are hung on the tie-rod with these cones fitted on the treadle bearings, on each side?

502 A. The treadle bearings could not get out of alignment. These cones could not get out of alignment, but they might slide. If the set-screw got loose, the cone might slide, and there might be a slide to one side or the other. But the bearings and the treadle being all cast in one piece could not get out of line unless you broke the casting.

Q. Have you seen the different machines on the market for many years past in which the treadle was hung in the cross-brace?

A. Hung in the cross-brace? I do not know that I understand exactly what you mean.

Q. You understand the double vertical cross-brace that is used in any of these machines?

A. Yes, sir. But it would be impossible for you to hang the treadle in the cross-brace in our machine.

Q. From your knowledge of those machines and of your own, will you state whether or not there is any actual advantage in hanging the treadle in the cross-brace?

A. I have never considered it so. I cannot see what the advantage would be.

Q. What is it that always carries the cross-brace?

A. It is usually fastened to the legs of the machine. Some of

them are fastened to the table at the top. The legs carry the entire machine, cross-brace and all. The legs are held in place by the lower rod and the table at the top and a cross-brace. The lower rod is ordinarily called a tie-rod.

Q. What, in turn, is it that holds the tie-rod and cross-brace and table in place?

A. The legs of the machine.

503 Q. Can the legs of the machine be loose and out of working order in any of those machines without the cross-brace also becoming loose and getting out of order—on account of their being one fastened to the other?

A. It would be impossible for the legs to get out of order—it depends upon how the machine is constructed. Some of them are constructed so that the brace holds the whole machine in place, independent of the table. Some of them are constructed so that the brace only braces the machine in the center at the top and in the center at the bottom, and when the table is not on it, the legs will wobble back and forth in this way. But when you put the table on, that stiffens it. The old style White was made that way, and they changed that a little and put the brace at the back of the stand, and the rod being set in the center; and the brace being in the back of the stand and the tie-rod being in the middle of the stand made it rigid so it could not move.

Q. Have you ever known any kind of machines to give trouble on account of the bearings of the treadle getting out of line with each other?

A. No, I never heard of such a thing.

Q. If that had been an ordinary, constant trouble with different machines, would you have known it?

A. I certainly would.

Q. To what extent, if at all, have you dealt with second-handed machines of other companies while selling your own?

A. Quite largely. We broke up some fifty yesterday that have been traded in, of different makes, and sold them for old iron.

504 Q. Can you tell whether there is any advantage in having the brace and the cross-bar at the bottom of the machines cast in two parts, as compared with having them all cast in one piece?

A. I think it is an advantage to have them cast separately. In case you should, in shipping, break one part of the casting, it would cause you considerable loss to replace it. If they are all cast together, you have to buy the whole thing. The tie-rod is not a casting. It is an ordinary steel rod, and it is malleable, while the casting is brittle.

Cross-examination of C. A. HAWKINS.

Mr. MILLER:

Q. What year did you commence to work for the White Sewing Machine Company?

A. In 1890. I had traveled for the Singer Company and for the

Wheeler & Wilson Company. I had also worked in the retail business for the New Home Company and the Domestic Company, from 1885 prior to 1890.

Q. Your experience with sewing machines commenced in 1885, did it?

A. No, sir; it commenced from the time I was ten years old—from the time I was old enough to remember. I went on the wagon with my father, and we went through the country retailing sewing machines. He was selling the Wheeler & Wilson.

Q. How was the treadle in that machine mounted?

A. The same as the treadle in the White is mounted now, with cone bearings holding the treadle, on the tie-rod. The treadle was mounted on the tie-rod, and two cones were put, one on each
505 side, each one held in position by a set-screw. The points of the cones formed the bearings for the treadle.

Q. What was the next machine you ever had anything to do with?

A. The Howe; my father handled them in the same way. I think the old Howe treadle was mounted square on the tie-rods, with collars that came up on each side, flat; did not have any cones. That is my recollection. It was a flat collar instead of a cone collar.

Q. What was the next machine you had anything to do with?

A. The New Home. The treadle on the New Home at that time was mounted the same as the Howe. I went to work for the New Home Company in 1885. I worked in their Kansas City office, in their adjusting department. I was not selling machines. I was office boy, assistant adjuster, and general roustabout. I was fifteen years old then. I helped with the repairing and adjusting. I did not sell any. I was there about eight or nine months. I then went to the Singer Company, at Kansas City, in the same position. They were selling the old N. F. Singer, what they called the New Family then, a low-arm machine.

Q. How was the treadle mounted in that machine?

A. The treadle, if I remember correctly, in that machine at that time had long points at the side, and I think that it worked on a knife-edge. That is my recollection. The knife-edge was located at each end of the treadle, and set in a sort of conical-shaped affair like this, and rocked. That was on the tie-rod. That is my recollection of it.

506 Q. I hand you a model, Plaintiff's Exhibit "F," which represents the tie-rod of a machine. Is that the one?

A. That is my recollection now of what they were using, this device, with the treadle mounted on knife-edges on these collars and oscillating back and forth this way. I would not be sure of the set-screws, where they were set, but that is the principle it worked on at that time.

Q. How long a time were you with them?

A. Three months. I then went to the Wheeler & Wilson Company and traveled and gave art exhibitions, sewing-machine fancy work. I was with them something over a year.

Q. How was the treadle mounted in those machines that you had anything to do with then?

A. That was the Wheeler & Wilson No. 8, mounted as already described, on the rod.

Q. I show you a treadle, Plaintiff's Exhibit "E," mounted upon a rod with cones and set-screws fitting into grooves in the treadle. Is that the kind of treadle you are referring to?

A. Very similar to this. The same in principle.

Q. How long did you continue to have any connection with those machines?

A. About a year. Then I went to the Domestic Company as salesman. They sold the Domestic.

Q. How was the treadle mounted in those machines?

A. I think the treadle was mounted on knife-edge bearings, mounted upon these collars upon a rod.

Q. I show you some cones and set-screws taken from ma-
507 chines and ask you if those are the kind of cones that were used in those machines where the treadle was mounted on a rod and held in position by cones and set-screws?

A. Yes, sir. The same kind of cones that are in this model, Plaintiff's Exhibit "E," are the same thing we use today on the White.

Q. Would not constant oscillation of the treadle cause the surface of those cones to wear?

A. Yes, sir.

Q. And would not the constant motion also tend to have the set-screw get loose?

A. No, sir. Not unless the cones were set too tight, In that case it might work loose.

Q. Do you mean to tell me that in a machine of this kind with your set-screw placed there and the constant oscillation of this treadle that would be natural, that that screw would not get loose?

A. I have sold thousands of them made just that way, and I never had a complaint, sir.

Q. I did not ask you that, sir.

A. I base it upon the experience I have had. I have never had a complaint of that kind. I never heard of a set-screw getting loose on one of these conical collars from the use of the machine.

Q. Did you from any other cause?

A. I think I have, in shipment across the continent, where they will work loose, and there will be a little play in the treadle. The set-screw would loosen and the treadle would have to be slid up. It would get loose in shipping, and I suppose the jar of the train, or something of that sort.

508 Q. When these cones would wear upon their face, what would be the result?

A. Loosen the set-screw and slide it up to take up the loose motion, because of the wear—the wear would make lost motion.

Q. Look at those cones which I showed you a little while ago, and see if some of them have not been worn into very irregular shapes, and sometimes on one side more than on the other.

A. Yes, sir. The lady probably used the machine a good many

years and never adjusted it at all; did not attempt to take up the lost motion.

Q. When those cones get into that condition, what would be the result on the machine?

A. You mean in the sewing?

Q. Yes.

A. I don't think it would have any effect whatever on the use of the machine.

Q. You think it would sew just as well when the cone was worn loose in that way as when it was tight?

A. Yes, sir.

Q. And there would be no change in it at all?

A. No, sir. There might be a little more noise.

Q. Do you mean to tell the jury here that, supposing these cones were to wear to such an extent that they would spread and the machine would rattle, that the sewing would be just as good?

A. Not a particle of difference. It would not affect the sewing part of the machine at all. It would not affect the sewing
509 if you took the treadle away and ran the machine by hand. You could throw the treadle away and run it by hand, and the sewing would be just the same.

Q. You would not make any false stitches at all?

A. No, sir; it would not make a particle of difference.

Q. Would there be any noise made by the rattling of the machine?

A. You could rattle the treadle, but that would not make any noise if the woman's foot was on it.

Q. So that practically there would be no detriment caused by the noise of the machine rattling?

A. Yes, I think that is a detriment, the noise of the machine. It makes it hard to sell.

Q. A machine is better that runs without noise than one that runs with noise?

A. Yes, sir; so far as selling it is concerned.

Q. What do you do, then, when these set-screws get loose and the cones get out of place?

A. As I say, we have never had any complaint from that source. When the cone wears, we loosen the set-screw and set the cones up, and take up the loose motion.

Q. Why do you loosen the set-screw and slide it up, to take up the loose motion?

A. Because it wears.

Q. You have just stated that it was just as good before you took up the loose motion as it was afterwards. Why do you want to take it up and do away with the loose motion?

A. To stop the noise.

Q. Mostly to stop the noise. Is that it?

A. Yes, sir; to keep it from rattling, getting loose.

Q. This is your honest opinion, is it, that you have been giving here, or is it just trade talk on your part, because your com-
510 pany is selling machines made with those cones and set-screws?

A. I do not consider that question worthy of a reply.

The COURT: Answer the question, Mr. Hawkins.

Mr. MILLER:

Q. Is this your opinion, or is it because your company is selling machines with these cones and set-screws upon them?

A. That is my opinion. I took an oath to give you my opinion, and I have given it.

The COURT: Answer the question, Mr. Hawkins.

A. I think I have answered it.

The COURT: You have not. Read the question, Mr. Reporter.

Q. (Repeated by reporter.) "This is your honest opinion, is it, that you have given here, or is it just trade talk on your part, because your company is selling machines made with those cones and set-screws?

The WITNESS: Did I not answer it? I think I did.

Mr. WHEATON: I submit that the question is insulting, and the witness ought not to be compelled to answer it.

The COURT: No. The plaintiff is entitled to know whether he is giving his trade views, or whether it is testimony for the benefit of the jury in this case. I think that is proper.

Mr. OFFIELD: I think he has answered the question properly, your honor, afterwards.

The COURT: Read the testimony, Mr. Reporter.

(Testimony read.)

You see, the witness has been guilty of impertinence in his reply. It would have been proper, perhaps, but he has been impertinent, and that cannot be tolerated. You will have to answer the question, Mr. Hawkins, as to whether that is your honest opinion, or not.

511

The WITNESS: That is my honest opinion.

The COURT: Now, you can go ahead, but do not answer counsel in that way again.

Mr. MILLER:

Q. Mr. Hawkins, I understood you to say that you did not consider that there was any benefit in hanging a sewing-machine treadle in the vertical cross-brace. Is that your opinion? I mean over and above the old method of hanging it on the rod and holding it in position by means of cones and set-screws.

A. I don't think there is any advantage in that. If there is, I can't see it.

Q. Will you please take that model which is there marked Plaintiff's Exhibit "P"?

A. That is the Singer.

Q. You have known of that for quite a number of years, have you?

A. Yes, sir; the treadle is mounted on conical points screwed in from the bottom piece of the machine. That is a different construction from any other machine.

Q. The treadle mounting is in no way connected with the legs of the machine?

A. No, sir.

Q. But it is connected with this vertical brace?

A. Yes, sir, it is connected with the brace and the lower support—I don't know what you would call that.

Q. That machine works very easily and nicely?

A. Yes, sir; I think that gives very good satisfaction.

Q. Do you mean to say there is no advantage in hanging the treadle that way in the vertical brace, over and above hanging it on the rod by means of cones and set-screws?

512 A. If there is, it is an advantage to the manufacturer, because he has only one piece to cast here, and the other way he has two. It would be cheaper to cast the one piece than two.

Q. That lower bar could be entirely cut away, could it not, at the point where it shows the brace, and entirely dispensed with, without destroying the efficiency of the device?

A. I should say that would weaken the stand very materially. It would weaken the brace.

Q. The bar across there is merely for strengthening purposes?

A. Yes, sir; that is, to stiffen the stand. That is for the same purpose that our tie-rod is.

Q. Your tie-rod is to stiffen the brace together, is it?

A. To stiffen the legs.

Q. This is not to stiffen the legs, is it?

A. Yes, sir, because it is attached to the legs right here.

Q. Is this not merely a part of the web of the brace, for stiffening purposes?

A. It is all made in one piece; ours is in two.

Q. Is there any advantage in making it in one piece instead of in two?

A. There is to the manufacturer, but it is really a disadvantage, because if you break any part of this, you have got to buy the whole thing. It is an advantage to the manufacturer, because he has only one piece to cast. It is a disadvantage to the user,

513 because if the user breaks any part of this, he has got to buy the whole thing.

Q. Is that the way ladies do, break these heavy castings on their machines?

A. They frequently break them when they are hauled about. It would not, in all likelihood, unless she moved about. I know there are a great many braces sold. How it comes, is a matter of speculation with me. We sell a good many of them, and I know all the companies do.

Q. You are engaged, as I understand, in preaching up your style of machine?

A. I am not engaged in that while I am on the stand.

Q. I mean on the outside.

A. I have scarcely anything to do with that feature of the business. My position now is to pass on the credits and employ the

help. I will not say I haven't anything to do with the machines. I superintend the whole business. I do not go outside to sell them.

Q. In view of the fact that your company is selling a machine with an old style of treadle mounting, consisting of cones and set-screws mounted on a rod, you do not go around town saying that this is a bad construction, do you?

A. I do not say anything about it.

Q. You would not admit that that was a bad construction?

A. I would if I had had any trouble with it. I think it is a better one than the Singer machine. I think there are one or two others just as good, but I don't think there are any any better.

514 Q. Did I understand you to say that you had sold about 25,000 machines of your style?

A. Yes, sir, during the last ten years. I don't think the Singer Company sell any more than we do, on the Pacific coast. In some territories they sell more. They work lots of territory that we do not touch. They claim to sell more than all the rest combined, and I think they do. Our company sells from three to four hundred a day in the world. On the Pacific coast it will run from 150 to 800 or 900 a month. I suppose perhaps 400 or 450 would be an average.

Q. How many other sewing machine companies are there on the coast here having their machines on sale?

A. There is the Wheeler & Wilson, the New Home, the Standard, the Domestic, and various other cheap machines; I could not enumerate all of them.

Q. And what style of machine does the New Home Company sell?

A. The treadle, I think, now is mounted somewhat similar to the Singer, except that those points, I think, come through the legs as well as through the brace.

Redirect examination of C. A. HAWKINS.

Mr. WHEATON:

Q. Mr. Hawkins, is it the treadle that usually sells the machine, or is it the mechanism that makes the stitches, the head of the machine?

A. Of course the head of the machine is probably ninety per cent. in importance, but every feature of the machine enters into it.

The COURT:

Q. I suppose the price enters into the question of sale?

515 A. Yes, sir; and the effort you make to sell them—that largely influences the sale.

F. S. PRESCOTT, called for the defendant, was sworn and testified as follows:

A. My name is Frederick S. Prescott; age, fifty-two; residence, Oakland, California; occupation, manager for the Wheeler & Wilson Sewing Machine Company. I have been engaged in the sewing-machine business thirty-six years. I have dealt most of the time with three different machines, but for several years all kinds, in taking in exchange and handling all kinds.

Q. Have you one of the frames here of the Wheeler & Wilson machines?

A. Yes, sir.

(The frame referred to was here introduced in evidence and marked Defendant's Exhibit No. 6.)

The WITNESS: Nothing has been made like that for fifteen years, to the best of my knowledge.

Q. How is the treadle hung in Exhibit No. 6?

A. On the rod with cones on either side.

Q. How long would it take to tighten those cones up and make the treadle tight?

A. Simply a turning of the screw and pushing of the cone up.

Q. These cones are out of place or worn so that the machine can be rattled, are they not?

A. They might become loose so as to rattle.

Q. Those are loose so that it can be made to rattle, are they not? (Counsel rattles machine.)

A. Yes, sir; just a little, it seems.

Q. In that case, does the bearing of that treadle get out of alignment at all even while they are loose?

516 A. No, sir. It is not possible to get the treadle bearings out of alignment. I have never known any of these treadles, such as are shown in this Exhibit No. 6, to get out of alignment. I have never heard of any trouble of that kind with that kind of a treadle. I have never heard of any such thing as a treadle getting out of alignment in any machine.

Q. In this Wheeler & Wilson stand is there a vertical brace?

A. Yes, sir.

Q. Do you know of any advantage that there would be in hanging the tie-rod on the bottom in the double brace instead of putting it in the web of the legs?

A. I don't see any advantage.

Q. Is it always necessary, where vertical braces are used, that the legs and the brace should be bolted solidly together, and has it always been done in practice?

A. They have been bolted together, the brace and the legs, yes.

Q. Has it always been the case, then, that the brace could not move without moving the legs at the same time, and the legs could not move without moving the brace at the same time?

A. The way that is constructed, the brace might be loose, and still the treadle rod would hold the frame together.

Q. When the stands are put together properly, could you move the legs without taking the brace along with them?

A. Yes, sir. This kind of a Wheeler & Wilson stand has been upon the market thirty years. It is not now in just that form.

517 Q. When these are bolted together—that is, the brace in this Wheeler & Wilson stand—with these bolts and nuts, top and bottom, and then the tie-rod put in, is not this vertical part at the end of the machine a part of the brace?

A. No, sir. The piece you refer to is a part of the leg.

Cross-examination of F. S. PRESCOTT.

Mr. MILLER:

Q. You have been working for the Wheeler & Wilson Company for five years, I understand?

A. Yes, sir. They have not sold stands of the style the same as this Defendant's Exhibit No. 6 for fifteen or eighteen years. They discarded that style of treadle some fifteen or twenty years ago. They adopted the present style perhaps four years ago.

Q. What is the present style?

A. Ball-bearings wheel, with a treadle connected from one leg to the other, running on points. There was an intermediate style between this and the other. That intermediate style had the treadle, with toggles, I will call it, set on the rod—the tie-rod you would call it—toggles set on that and points at either end, and the treadle running against these points. They used that style up to about five years ago.

Q. If I understand you, then, the first one, which is this one, Exhibit No. 6, was used up to about twenty years ago, and then they discarded that style, and then adopt- this second style, with the treadle mounted on the rod, and about four years ago they adopted the present style?

518 A. Yes, sir. In the present style there is an arm at either side of the treadle extending to either of the legs, and it runs on points. The arms and the treadle are cast in one piece.

Q. The treadle is practically, then, a treadle provided with trunnions provided on either side, is it?

A. Yes, sir.

Q. What do those trunnions work into? Where do they fit?

A. They work on a point screw, somewhat similar to the style of bearing of the Singer machine, as shown in this model, Plaintiff's Exhibit "P."

Q. Assuming that the construction of the bearing there in Plaintiff's Exhibit "P" is a conical screw, working into a countersunk hole, you say that is practically the same style they have adopted now?

A. Yes, sir; somewhat similar.

Q. Do you find any advantage in that style?

A. I do not know that it is any advantage over the other one that

we used there, any more than it reduces the friction somewhat. They adopted it because it was supposed to be an improvement. I cannot tell why they discarded the old style of twenty years ago, nor why they adopted the present style.

Q. I show you a treadle mounted on a rod with cones and set-screws, marked Plaintiff's Exhibit "E," and ask you if you are familiar with that style of treadle.

A. Yes, sir; I am. That is an old style of treadle, too.

Q. In the constant oscillation of a treadle of that kind, would not the surface of those cones wear away?

519 A. No, sir; it would not be perceptible, because the treadle works very slowly.

Q. I will show you one in which the edges have been worn off, marked Plaintiff's Exhibit "U." Do you say that is not perceptible wear?

A. Even that could be adjusted so there would not be any lost motion.

Q. Do not those cones wear on their surfaces so as to become loose on the rod?

A. Those are worn somewhat. Yes, sir; it may happen.

Q. Are not the set-screws liable to get loose on those cones?

A. They might get loose; they are not liable to.

Q. You think a set-screw that holds a collar in place on a rod as a bearing, where the treadle is vibrating constantly, is not liable to get loose at all from the operation of the machine?

A. Not as a rule; no, sir. If they should get loose it would rattle. There would be no other result that would be detrimental.

Q. In the model, Exhibit "E," I have the cones screwed up tight against their bearing surfaces. In that position the bearings of this treadle are both rigidly in line and a fixed distance apart, are they?

A. Yes, sir.

Q. Now, if these cones were to be moved, either from being jostled out of position, or from wearing, or from being actually moved by hand, or in any other way, it would be loose there, would it not, and the bearings would no longer be rigidly in line, would they?

520 A. No, sir; not if they remained so. They could be easily put back, however.

Q. I understand that, but I am asking you about it just as it is now. If these cones should be moved a little distance down, then the bearings would be no longer rigidly in line?

A. I don't know but what they would, because they could equalize themselves on the two cones; you slide one cone, and the treadle will equalize itself between the two cones.

Q. They would no longer be at the same fixed distance apart that they were before?

A. No, sir; that is very apparent. I should say they would be in alignment.

Q. Suppose they were to wear down a little that way and get out

of contact with the cone there, either from wear or from any other cause. What would be the result in the operation of the treadle?

A. There would be nothing that would be of any disadvantage except the noise, and then it could be tightened up—it ought to be.

Q. Do you mean to tell me that there would be no disadvantage in operating the treadle with the cones loose?

A. No, sir; nothing particular, because the treadle goes so slowly. If it was in the head of the machine, it would make all the difference in the world.

Q. Would this treadle operate just as well when these cones were loose instead of being set up against the bearing of the treadle?

521 A. Not quite as well, perhaps, you would hardly know the difference when you were running the machine. The object of the cone is to make it tight, to stop the noise, principally. They do not want it to be loose. And when it gets loose they tighten it up. If these cones should get loose, I would tighten them.

Q. The operator who is using the machine would have to tighten them, would he?

A. He should; not "have to," but "should."

Q. Do ladies and people of that kind who use sewing machines, generally understand how to adjust these cones?

A. Not as a rule.

Q. How do they do when they get out of adjustment; send for the agent?

A. Send for the agent, or use it and not notice the difference.

Q. Did your company discontinue the use of those cones and set-screws with the treadle mounted on the rod, as here shown, because the present style that they have is an improvement over that?

A. We sell quite a number of machines. We do not sell any of the machines like this old one. I have not sold any of those while I was with the company.

Q. No company would today undertake to exploit and sell a machine like this old one that was here exhibited to the jury, in competition with the modern machines?

A. You asked me if any company would, and I say they do, like this old machine.

Q. What company?

A. The New Home Company, for instance.

Q. You have seen their machines, have you?

522 A. I have; yes, sir.

Q. Is one of their machines in court here?

A. I don't know whether there is one here or not. They are on the market.

Redirect examination of F. S. PRESCOTT.

Mr. WHEATON:

Q. The object of the treadle is to run this band wheel, is it not?

A. Yes, sir; that is true in all machines, and the band wheel runs the head that does the sewing.

Q. Taking this with the rattling treadle in it, does it make a particle of difference, that rattling, with the action of the band wheel?

A. No, sir; it does not.

Q. With the treadle ever so loose, so long as it will oscillate, whether it rattles or not, it will run the band wheel just the same?

A. Yes, sir.

Q. And that band wheel, connecting between the treadle and the stitching part of the machine, prevents the treadle from having any effect on the stitching mechanism?

A. Yes, sir.

Q. Please look at this next stand, which is just produced, and state what that is.

A. That is the intermediate one that I speak of, that Mr. Miller was questioning me about, Wheeler & Wilson's, first used fifteen or eighteen years ago.

(The stand referred to was here introduced in evidence and marked Defendant's Exhibit No. 7.)

Q. On what is this treadle swung in Defendant's Exhibit No. 7?

A. Points, commonly known as point centers among machine men. The treadle is concave at either end, and the point enters the concave.

523 Q. Are not those points just as apt to wear as were the cones on the preceding Wheeler & Wilson machine?

A. This is reduced to a finer point, a little less friction. They do not wear. I have not found any yet that were worn.

Q. I understood Mr. Miller to speak of these cone bearings, such as are in this Exhibit No. 7 and in Exhibit "P," as trunnions. Have you ever known them to be called trunnions in the trade?

A. No, sir. I have never used the word, and never have had it described, not in our list. I guess that is the correct name, though. I do not know technically what a trunnion is. I suppose the trunnion and the point to be the same. If a trunnion means a solid arm, then it would not be the same.

Recross-examination of F. S. PRESCOTT.

Mr. MILLER:

Q. I understood you to say that in no sewing machine were the treadle bearings liable to get out of alignment.

A. I don't know that you asked that question.

Q. No, I did not. But I understood you to say that in answer to a question by Mr. Wheaton?

Mr. WHEATON: "Out of line with each other" was my question.

A. It would be possible; not probable. It might become worn or it might become twisted.

Q. When you set up one of these machines, how do you get the treadle in just the right position?

524 A. There is an end of the treadle goes against the lug like that. The other is adjusted to it. I would have the pitman

rod perpendicular. I would have it straight up and down. I would not have it slant one way or the other. I would have it straight up and down with the leg.

Q. You mean you would have it parallel with the leg?

A. Parallel would be a better word.

Q. Then it is in alignment with the leg and with the band wheel, when it is parallel with it?

A. Yes, sir.

Q. And it is desirable that it should always remain in that position?

A. Yes, sir.

Q. Suppose it should get out of alignment with the legs and band wheel. What would be the result?

A. There would be no particular result. In old machines I push that out of line so as to tighten them. It is better to have the pitman parallel with the leg. But should it be a little one side, there would be no harm in it.

Q. Take this model again, Exhibit "E." If you were going to put that in a machine, how would you arrange it in its initial position, with the rod?

A. I would have this pitman so that it would go up and down straight—parallel with the legs, and then I would bring the cones to it.

Q. Suppose, after you had worked a machine a little while, those cones should wear loose so the treadle should be shoved down to the side, and so the pitman would no longer be parallel with the leg. Then it would be out of alignment, would it not?

A. The pitman would; the treadle would not, not in my
525 definition of alignment. If that thing should happen, the result would be that it would cause it to run harder. To overcome that, I would move it back.

Q. Then you would set up these cones—unloosen the set-screws, push the cones up, and then tighten the set-screws again?

A. Put it into its proper position; yes, sir; in the same position in which it started, and then it would operate all right.

TUESDAY, *April* 10, 1900.

C. A. HAWKINS, recalled for defendant.

Mr. WHEATON:

Q. Mr. Hawkins, you are the same person that was on the witness stand before?

A. Yes, sir.

Q. What is this stand which is now produced?

A. That is the old-style White machine. The bearings in that are cones at each end of the treadle attached to the lower rod—at least, they fit the lower rod, and have set-screws to keep them from sliding back and forth.

Q. Is the rod that you speak of a tie-rod?

A. Yes, sir; it holds the legs of the machine together; it acts as

a brace, to help the upper brace support the stand. I mean the cross-brace at the top.

Q. This?

—. ——.

Q. How is that brace connected with the legs of the machine?

A. It is attached to screws.

Q. Here is a screw, which connects the lower end of the vertical brace with the web of the legs. How far is that from the end of the tie-rod which fastens the legs to each other?

A. As close together as they can be, without possibly
526 weakening the leg or coming in contact with one another. I suppose it is an inch from the center of one bolt to the center of the tie-rod.

Q. Can you state whether it would be any advantage or not to have extended this cross-brace down an inch or two further, and let the tie-rod have passed through that, and so fasten the lower end of the brace to the leg by virtue of the tie-rod alone, and without the use of this upper bolt?

A. I don't think it would, no.

Q. Would it have made any stronger connection of all the parts than is now made in the stand as it is?

A. No, sir; I cannot see that it would make any particular difference one way or the other.

(The stand referred to was here introduced in evidence and marked Defendant's Exhibit No. 8.)

Q. How long do you say you have been dealing in these White machines?

A. Something over ten years.

Q. Mr. Hawkins, have you ever had any trouble with these stands on account of the bearings of the treadle getting out of alignment with each other?

A. No, sir.

Q. Have you ever heard of such a thing, or known of such a thing, as those treadle bearings getting out of alignment with each other?

A. No, sir.

Q. Is it possible for those treadle bearings to get out of alignment with each other when placed on the tie-rod, as shown in this exhibit, and as you have always used them?

A. No, sir, impossible.

527 Q. Is that tie-rod in there now just as firmly in place as it would be if it went through the lower ends of the cross-brace, those ends being extended down far enough to let the tie-rod pass through them?

A. Yes, sir.

Q. Do you know how old this particular stand is?

A. No, sir; it is the style of the old stand. I never saw that before.

Q. Does that treadle run with a noiseless motion?

A. It would not make any noise when sewing on it. I suppose

if it had been used long enough, you can shake it and make a noise. With the foot on it it would not make any noise.

Q. There is no close fit in this particular stand between the cones that constitute the bearings of the end of the treadle and the treadle itself?

A. It fits about as they usually do, I think. Those cones are never set up tight; at least, there is usually a very little play there, so that they will not bind and make the machine run harder.

Q. Has there ever been any trouble on account of any noise caused by the rattling of this class of treadles, to your knowledge?

A. No, sir.

Cross-examination of C. A. HAWKINS.

Mr. MILLER:

Q. Did you say this was an old machine?

A. That is the old style.

Q. Look at it and see if the band wheel is not a new one, if the pitman is not a new one, and both the band wheel and pitman are not of the latest improved styles of band wheel and pitman known to sewing-machine men?

A. No, sir.

528 Q. Look at it and see if the band wheel is not a new one.

A. It is the same as we have used for a great many years, except the new one has ball bearings.

Q. Look at this particular band wheel upon this machine, and say whether it is a new one or an old one.

A. An old one.

The COURT:

Q. What do you mean by "old one"?

A. Old style.

Q. In use how many years ago?

A. Probably fifteen years ago, up to within a year and a half ago.

Q. It has been now discarded?

A. The ball bearings have been added to it.

Mr. MILLER:

Q. We are speaking now about the band wheel.

A. It is the same band wheel only it has ball bearings.

Mr. WHEATON:

Q. Has this particular band wheel got ball bearings?

A. No, sir.

Mr. MILLER:

Q. You notice that all the bearings or journals have been oiled in this machine. Look at the treadle bearings also, and see if they are not covered with oil?

A. Yes, sir; they have been oiled.

Q. Take the treadle in your hand and see if you cannot shake it backwards and forth?

A. Yes, sir; it is due to the cones not being tight enough.

Q. Suppose the cones were to be further apart; would the noise be increased?

A. You could shake it that much harder.

529 Q. If the cones were to wear, that result would occur?

A. These cones are worn as much as ever I saw.

Q. I did not ask you that. I said, if they were to wear still more, there would be a still greater distance?

A. The wear on the cones would be down, and not sideways. The wear on the cones is the pressure down. That it is worn so that it will shake as much as it will ever shake.

Q. If the wear would not be equal, the treadle would be out of line, would it not, one end with the other?

A. No, sir.

Q. One end would be lower than the other, would it not?

A. I don't know how you would go about wearing one end of the treadle more than the other. The weight is about the same on each end.

Q. Suppose the set-screws were to get loose in that treadle. What would be the result on the cone?

A. The cone would probably slide back. The treadle would run the same, except it might wobble. It would pull the pitman along with it.

Q. In that case, the pitman would be out of line, would it not?

A. No, sir, not as this machine runs.

Q. The pitman is in line now as the machine stands?

A. Not quite.

Q. It is supposed to be parallel with the legs, is it not?

A. It does not make any difference in this machine whether it is or not; it does not have to be straight.

Q. Do you say the top bearing is a ball bearing?

530 A. No, sir; it is a ball; it fits in here (pointing). You loosen this screw, and slide this cup up, and it is cone-shaped.

Q. That is one of the late improvements of the White Company?

A. No, sir; that is what they have always used, ever since they have been making the machines.

Q. If the set-screws on the cones were to get loose, and thereby cause the treadle to get loose horizontally on the rod in a direction opposite from the pitman over to the right, what would be the effect of that on the pitman?

A. It would not have any effect. It would operate as well then as before. It would not make the slightest difference. You might move it over here far enough; that would make a slight difference. The machine might not run quite so easy.

Q. Do you mean to tell me, if the treadle in that exhibit were slid horizontally on the rod, so as to move it from the position in which it now is, that it would have no effect on the operation of the machine?

A. No, sir.

Q. Would it not make the machine run harder?

A. Not unless you moved it a considerable distance, it would have no effect.

Q. Was that ball arrangement there known as early as June, 1880?

A. Yes, sir; that has always been on the White machine.

Q. When was that first put on the White machine, what year?

531 A. I never saw one so old that it was not on it.

Q. When was the first White machine you ever saw with that on it?

A. Probably eighteen years ago; probably twenty years. In 1880.

Q. How old were you in 1880?

A. I was ten years old.

Q. You are assuming from that fact that the White machine had that arrangement on in 1880?

A. I knew they always had it on. I would not be sure when I saw the first White, as I cannot recall anything about it.

Redirect examination.

Mr. WHEATON:

Q. Loosen the set-screws, shove the collar one way or the other, and see how that stand does operate. How far endways on the rod did you shove that treadle?

A. About an inch and a half.

Q. Now fasten it down. It runs a little harder that way than it would if the treadle was in its proper place?

A. Yes, sir; this bearing here binds it. If I loosen this bearing, it will run just the same—this bearing here (pointing).

Q. Just shove that treadle as far the other way as it will go.

A. It will work just the same.

Q. Is it the fact that you can adjust that treadle an inch and a half to one side of where it ought to be, and the machine still work?

A. It will run just the same, yes.

Q. Fasten that where it ought to be, only loose enough so

532 that it will rattle. I want to get these trunnions so close that it will rattle.

A. It will not rattle when you run it, unless you shake it.

Q. Is it running now without any rattling noise whatever, and running just on the tie-rod alone, without any bearing on the cone collars at all?

A. It is loose on the rod. You can shake it. But sewing with your foot on it, you will not shake it. You can run it fast enough so that when the treadle comes up, it will jump, and then it will rattle.

Q. This entire arrangement shown in Exhibit No. 8 is the same that has been used on the White machine for twenty years last past?

A. Yes, sir; it is the same that has always been used since the White machine has been made, to my recollection.

JOHN W. EVANS, called for the defendant, was sworn and testified as follows:

Mr. WHEATON:

Q. What is your occupation?
A. Selling sewing machines.
Q. How long have you been a dealer in sewing machines?
A. Upwards of thirty years.
Q. In what particular class of sewing machines have you been dealing?
A. In the Domestic.
Q. What is this machine that is now produced here (pointing)?
A. That is a Domestic stand.

(The machine referred to was here introduced in evidence and marked Defendant's Exhibit No. 9.)

533 Q. In that Domestic stand, how is the treadle carried?
A. The treadle is on the V bearings resting on the treadle rod. There is a knife-edge under the treadle, and a V-shaped groove in the rod in which the treadle oscillates, or with the collars on each side to keep it from moving sideways.
Q. You have now taken the treadle out of the machine have you?
A. Yes, sir.
Q. This stand has a tie-rod, has it, which connects the lower part of the legs to each other?
A. Yes, sir.
Q. And in the top of that tie-rod, is there a groove where the knife-edge on the lower part of the treadle sits?
A. Yes, sir.
Q. Is it possible, as that is constructed, for the bearings of the treadle to get out of alignment with each other?
A. No, sir.
Q. How long has this Domestic machine been on the market?
Mr. MILLER: You mean, how long has this treadle arrangement.
Mr. WHEATON: We will get at the history of it. I do not know what the answer will be.
Mr. MILLER: You ought to know. I know what it will be.
A. I do not quite understand your question.

Mr. WHEATON:

Q. How long has this Domestic machine been on the market?
A. About thirty-five years I believe.
534 Q. How long has this kind of a treadle been used upon the Domestic machine; that is, with these knife-edge bearings sitting in grooves in the upper part of the tie-rod?
A. Since 1883.
Q. Has there ever been any trouble growing out of any noise made by that class of treadle while the machine was in use?
A. No trouble, unless those collars slipped to one side.
Q. Is there any tendency in those collars to slip to one side?
A. No, sir.

Q. What kind of a treadle connection was used in this Domestic machine before 1883, if you know?

A. The conical-shaped collar fitting into the tapered hole in the treadle, the same as was used on a great many machines; yes, the Wheeler & Wilson used to use it. The Singer had it at one time.

Q. Do you know Mr. Cramer, the plaintiff in this case?

A. Yes, sir.

Q. When, if ever, did you have any conversation with him with reference to his method of connecting the treadle with the stand in his machine?

A. I think it was the latter part of 1882 that he told me he was getting out something the first time.

Q. What did he represent to you then with reference to his invention, if anything?

A. I hardly know what he represented then. Afterwards he brought me a model of it. That was later, though. I don't remember what he told me.

Q. About what time did he bring you the model you speak of?

A. In the early part of 1883.

535 Q. Do you recollect the conversation that passed between you and him at that time; if so, please repeat it as nearly as you can.

A. I cannot repeat the conversation. I simply remember that he brought me an arm of a brace, the lower end of a brace about six inches long. The lower end was pear-shaped, with a pear-shaped hole in it. That brace was to be attached to the treadle rod, and the frame of the treadle in this brace, which was a pear-shaped hole, as I said before, with a V bearing in the bottom, in which he was to have his treadle rock or oscillate.

Q. What was his object in showing you at that time?

A. As an improved bearing in the treadle, as I understood him.

Q. Was it anything he desired you to adopt?

A. Yes, sir; he asked me if I could not send it on to the Domestic Company. His idea, as I got it from him, was, he would have an arm on the treadle resting in this pear-shaped bearing, with a V edge or knife-edge beyond the end of the treadle. I remember I remarked to him that it was an infringement on the Willcox & Gibbs. He replied that he got his bearing on the end of the brace, and they had it in the leg, a very similar bearing.

Q. What efforts did he make to have you adopt that, or have the Domestic Machine Company adopt his improved bearing, as you have called it?

A. I don't know that he made any particular effort. He wanted me to send this little piece that he brought me on to the company. I did not think it necessary, because I had just returned from

536 New York, and first saw that stand with a similar bearing, to say the least, and knew the company would not make a change at that time. I did not tell him that, though.

Q. Which did you see first, the Domestic bearing, as shown in Exhibit No. 9, or the Cramer device?

A. I saw this before I saw his model, but he had talked to me about his before that.

Q. Would the Domestic Company entertain his idea of using his device?

A. I talked with some of the officials when I was in New York in January, 1882, and they replied they had something equally as good, and would not consider it at that time.

Cross-examination of JOHN W. EVANS.

Mr. MILLER:

Q. I understand that this style of treadle mounting, as shown in this model, Exhibit No. 9, was adopted by the Domestic Company in or about 1883, was it?

A. I saw the first of it in New York in January, 1883.

Q. Prior to that time, I understand, that they had been using the device consisting of cones and set-screws on the rod?

A. Yes, sir.

Q. That style of mounting, consisting of the cones and set-screws, was the one, I believe, that was in general use by machine companies at that time?

A. Quite general I believe. The Singer Company had been using it, and the Wheeler & Wilson Company, the old Howe and the Florence. In fact, pretty much all the companies had
537 been using that construction for a number of years. It was the general way of mounting a treadle at that time.

Q. Do you know who it was that got up this treadle mechanism in the Domestic machine, that took the place of the old cones and set-screws?

A. I don't know who invented this.

Q. Do you know why it was they changed from the old style of cones and set-screws to the style shown in this model, Exhibit No. 9?

A. To get a quieter motion, with less friction; that would be my judgment of the matter; from what I was told.

Q. It was an improvement over the old style?

A. It was an improvement, in my judgment. It was gotten up as an improvement.

Q. In the old style of treadle mounting, consisting of the cones and set-screws, what occurred when the cones wore and the set-screws got loose, what was the result?

A. The treadles were more noisy.

Q. It would shift backwards and forwards on the rod, would it?

A. Yes, sir, somewhat.

Q. Would that tend to throw the pitman out of alignment also?

A. It would throw it off at an angle, yes.

Q. The pitman, when working in its normal condition, is supposed to be parallel with the sides or legs of the machine, I understand?

A. Yes, sir. That is the proper position for it.

Q. If that pitman was thrown to the side at an angle so as to get out of that normal position, that would not be the proper way to run the machine, would it?

538 A. No, sir.

Q. And the machine would run harder, naturally, would it not?

A. If it were pressed over or shifted to one side a considerable distance, yes; it would run harder.

Q. In other words, there is a proper position for the pitman to operate in, and that is the position in which you endeavored to keep it, as near as possible, all the time?

A. Yes, sir.

Q. In the case of the treadle mechanism which is shown in this model, Exhibit No. 9, suppose the set-screws and those collars were to get loose, and in that way the collars were to move a distance on the rod, what would be the result?

A. That treadle is very liable to slip off the rod—will slip off. I don't know that I can explain it, excepting that you remove the collars and get to running it, and it will probably jump out of the grooves—unless your foot is on it. If there is pressure on the treadle, you can keep it there. But, running it without the collars and no pressure on the treadle, it will lift it out of the grooves.

Q. Those set-screws wear loose sometimes in running the machine, do they not?

A. I have not known them to in running the machine; no.

Q. I mean to say, after the machine has been in operation a certain length of time, the set-screws become loose from their constant use, do they not?

A. There is no tendency there to loosen the set-screws, Mr. Miller.

539 *A.* I am not asking you about the tendency. I am asking you if it is not a fact in this mechanism, as in all mechanisms where a set-screw is used to carry a moving part in use, that the constant use, shaking, vibration, or other handling of the machine, will necessarily loosen the set-screw?

A. It is possible that they will sometimes work loose; yes, sir.

Q. When they do work loose, that is contrary to what is desired in a machine, is it not?

A. Yes, sir.

Q. And then you go and tighten them up and fix them into the proper position, do you not?

A. Yes, sir.

Q. You know that set-screws have worked loose on bicycles, however tight you screw them up, do you not?

A. I have had them get loose on bicycles; yes, sir.

Q. And you have had to get down off your wheel and go to work and tighten them up, have you not?

A. Yes, sir.

Q. So that would happen on any kind of a machine where the set-screw was on the vibrating part or moving part?

A. Yes, sir. They are liable to loosen any time—if not properly set up at first, particularly.

Redirect examination of JOHN W. EVANS.

Mr. WHEATON:

Q. Going back to the tie-rod as you used it with the conical collars before the Domestic Company adopted the knife-edge bearing, please state whether or not you have had any trouble from the set-screws getting loose?

540 A. There was trouble, because the treadles were more noisy—or annoyance, if not trouble. The treadles were more noisy when the cones slipped away.

Q. I inquired whether the set-screws used to get loose in that old construction.

A. They would occasionally get loose with any set-screw, and that set-screw would get loose once in a while.

Q. Was it a source of any considerable trouble at all?

A. It was a source of some annoyance, yes.

Q. In use, did you ever know the bearings of the treadle to get out of alignment?

A. No, sir.

Q. Was it possible in that construction for the bearings of the treadle to get out of alignment?

A. I think not.

Q. Did you ever know anything of that kind to happen in any of those machines which used that class of tie-rod, with cone collars for supporting the treadle?

A. I have never heard it mentioned that they got out of alignment; they would get loose.

Q. When they got loose, how much trouble was it to put them in order again?

A. Oh, very little. You just had to loosen the screw and slide the collar up to the treadle, and tighten it again.

Q. In those cases, when the cones were out of place and the machines were being run with the foot of the operator on the top of the treadle, would there be any rattling noise?

A. Running the machine without the foot on the treadle, it would make a noise; or, if you put your foot on it and worked it unevenly, it would make a noise.

541 Q. But as it would be ordinarily used, it would not make any noise?

A. No, sir.

Q. Would the noise when it was made, as you speak of, be any considerable source of annoyance? Would there be noise enough to be noticeable?

A. It would be noticeable; yes, sir.

JOHN A. MACMILLAN, called for the defendant, was sworn and testified as follows:

My name is John Alexander Macmillan. I live at 545 Franklin street in this city. I have been employed by the Singer Manufacturing Company nineteen years, receiving their goods and shipping

them; shipping clerk and receiving clerk. I receive everything that comes into the house and report, and report everything that goes out of the house, in the line of machines. As shipping clerk, my duties were to take note of all the machines that went out, shipping them to various markets. And I superintended the setting up of all machines in my department.

Q. Do you remember when the brace which is shown in Plaintiff's Exhibit "P," known as the Diehl brace, first came into use by the Singer Company?

A. In 1886 or 1887, either one of those two years. I have no means of knowing when it was shipped, but I have means of knowing when we received them.

Q. Have you examined the books to see when a consignment of those Diehl braces first came to San Francisco?

A. We did not know anything about the Diehl brace for many years after they came out—we did not know the name "Diehl" brace.

542 Q. You know the kind of brace that I have reference to, do you not?

A. Yes, sir. I know that first come to the Pacific coast, as far as I know, in April, 1886. If it had come sooner than that, I would have known it.

Q. What do you find in the books of the Singer Company, to show that that brace first came here in 1886?

A. That was our first consignment of Improved Family stands. Previous to that we were using the same machine that we were using in this brace on the trade-mark stand—on the old-style stand, called the "trade-mark" stand—"New Family" stand.

Q. What name was given to the machine in which the Diehl brace was first put here on the Pacific coast?

A. "Improved Family."

Q. Was there any other name given among the employees by which to indicate that brace from others?

A. We called that stand the stand of 1887. That is the first stand of the kind that we got with the Diehl brace in it; and that machine was called the "Improved Family" machine.

Q. Have you made a special search through the books of the Singer Company to ascertain when you first received any of the Diehl braces in San Francisco?

A. Yes, sir; I have. I did that last week.

Q. After those Diehl stands came to the Pacific coast, how long before they were put on the market and sold?

A. I could not tell that, because the "Improved Family" machine, or any other machine, when it was sent out, was designated by the style of the machine or the style of the woodwork. I

543 don't know when that went out; I could not say. But I think they came into universal use in 1887 although we had then in hand in 1886.

Q. What is this stand that is just now produced?

A. That is the "New Family" stand, called the "trade-mark" stand.

(The stand referred to was here introduced in evidence and marked Defendant's Exhibit No. 10.)

Q. When, if ever, did the Singer Company use this "trade-mark" stand, Defendant's Exhibit No. 10?

A. They had been using that stand when I came to work for them. That was the stand they had when I went to work for them in April, 1881. This stand has the word "trade-mark" cast into the web of the legs.

Q. How early, do you know, of your own knowledge, of the Singer Company using this "trade-mark" stand?

A. Nineteen years, when I went to work there, here in San Francisco.

Q. Explain to the jury how the treadle is hung in this "trade-mark" stand.

A. The treadle is hung on center pivots going through the legs, and there is a concave at the end of the treadle—at each end. The one on the left leg is a plain center, driven in. On the right leg there is an adjustable screw center.

Q. Look at these small devices which I now show you, and state what they are.

A. Those are the center pins, going to each end of the treadle, one at the right end and the other at the left. This one is adjustable. That was the style used in the "trade-mark" stand.

544 Q. Those are the screws that were used in the "trade-mark" stand, in which the treadle was hung in the "trade-mark" stand?

A. Yes, sir.

(The devices referred to were here introduced in evidence, and marked, respectively, Defendant's Exhibit No. 11 and Defendant's Exhibit No. 12.)

Q. Exhibit No. 12 has no screw upon it. How was that fastened in the legs of the "trade-mark" stand?

A. It was driven in from the inside. It just struck that shoulder, and that brought it to its place, and when that projects out through the inside of the leg, then the treadle will fit against it at the right place, and when the treadle is up to that point, it is in the right place for the pitman and wheels. Then this other one is adjustable, to set this up against. The one on the other end is used for the screw. That is an adjustable screw, with a jamb nut on it.

Q. Is there a hole cut through the legs into which this Defendant's Exhibit No. 11 is screwed, and when that Exhibit No. 11 is screwed far enough in, it holds one end of the treadle in the proper position?

A. Yes, sir.

Q. What is the nut on this Exhibit No. 11 for?

A. When that is in the right place and the treadle properly adjusted, so that it will drop in and there will be no lost motion to it, then that nut is screwed up and holds it in place. Then this other nut here is screwed up close and makes a jamb nut.

Q. I see in this "trade-mark" stand there is a double brace connecting the two ends of the legs together, or, rather, the legs at the ends of the sewing machine together.

545 A. Yes, sir; and the lower extremities of the double brace are bolted to the web of the legs.

Q. How far is that bolt that fastens the lower extremity of the double brace to the leg from the point-center bolt that carries one end of the treadle?

A. I could not tell to a fraction—about two inches.

Q. The "trade-mark" stands were always used by the Singer Company with the legs and cross-brace thoroughly bolted together?

A. Yes, sir.

Q. In that case, was it possible to move the legs without moving the brace?

A. No, sir.

Q. Was it possible to move the brace without moving the legs?

A. No, sir.

Q. Was it, for all practical purposes in working the machine, just as it would be if the cross-brace and legs had all been cast together in one piece?

A. I think so.

Q. Was there ever any trouble on account of the bearings of the treadle getting out of alignment?

A. Not that I know of. I would have known it if there had been any trouble of that kind.

Q. Did you receive the second-handed machines that would be brought back when new ones were traded for them?

A. Yes, sir; that is part of my business.

Q. Did you ever know of their coming back with the cross-brace loosened from the legs?

A. That I could not tell. I don't remember. Not very often, I don't suppose. I do not remember of that ever occurring.

546 Q. Do you know to what extent the cones would wear in the ends of the treadle?

A. No, sir; could not tell to what extent.

Q. Look at this Exhibit No. 12, which is one of the conical bearings, and state whether or not that shows a great amount of wear.

A. Yes, sir. It is considerably worn. I don't know where that very one came from. I gave them a set of them about three days ago. Perhaps that is the same. That came from a very old machine, that has been used for a long while. Used dry, without being oiled.

Q. When those cones would wear like that, or wear at all, did it create any rattling of the machine when the machine was in use?

A. Not to a great extent. There was very little rattling in the treadle at any time.

Afternoon session.

APRIL 10, 1900.

(The witness Macmillan was here temporarily withdrawn.)

A. T. EGGLESTON, called for the defendant, was sworn and testified as follows:

I am manager for the Wilcox & Gibbs Sewing Machine Company, at 334 Post street, in San Francisco. I have been selling the Wilcox & Gibbs machine.

(A Wilcox & Gibbs machine was here introduced in evidence and marked Defendant's Exhibit No. 13.)

Q. How long has the Wilcox & Gibbs Sewing Machine Company been selling stands of this kind, to your knowledge?

547 A. About thirty years. I have been selling them twenty-eight years.

Q. How long since the Wilcox & Gibbs Sewing Machine Company have used any other sewing-machine stand?

A. As near as I know, it is about thirty years. They have been making stands like this, Defendant's Exhibit No. 13, for thirty years last past.

Q. In those stands, has there been any vertical cross-brace used to connect the legs of the two ends of the machine?

A. No, sir.

Q. Have you ever found that vertical cross-brace necessary?

A. No, sir.

Q. Have those Wilcox & Gibbs sewing machines, with this kind of a stand, been sold constantly for the last thirty years, generally throughout the United States?

A. Yes, sir.

Q. How are the treadles hung on that stand?

A. The treadle has a rod or an arm running from each side of it to the leg and fitting in a little recess in the leg and resting on knife-edges, under each end of the treadle bar. It is not hung on cone centers of any kind or conical-shaped collars.

Q. Have you ever known the bearings of that Wilcox & Gibbs stand to get out of alignment with each other?

A. No, sir.

Q. Is it possible for them to get out of alignment with each other, say while the machine is going?

A. I don't see how it is, if the treadle rod is in, unless the treadle rod is bent. If the treadle rod is straight, I don't think it would be possible.

548 Q. How does the price at which these Wilcox & Gibbs machines are sold compare with the prices that other machines are sold at?

A. I believe it is a higher price than any other machine.

Q. That is to say, the Wilcox & Gibbs sewing machine is higher priced than any other sewing machine?

A. Yes, sir.

Q. And they have been sold constantly for the last thirty years in competition with other machines, have they?

A. Yes, sir.

Cross-examination of A. T. EGGLESTON.

Mr. MILLER:

Q. Mr. Eggleston, where did this particular stand, Defendant's Exhibit No. 13, come from?

A. I don't know. This is the first time I have ever seen it. They are all alike. I can't tell one from another.

Q. Is this stand the same character of machine, so far as the treadle mechanism is concerned, that your company is now selling and that they have been selling for this period of time that you speak of?

A. Yes, sir. In that machine, the treadle and the rod on which it is mounted are all cast in one piece. The treadle and the arms from the treadle—we call it the treadle, the whole of it; it reaches from one leg to the other. From the treadle proper there is an arm branching out and running into the leg, and we call the whole thing the treadle.

Q. So that it is a treadle with trunnions extending from each side?

A. An arm extends to each leg.

549 Q. That might be called a trunnion, I presume, after the general nature of the trunnion, might it not?

A. I never heard it called a trunnion. It is an arm, and on each side of the treadle, cast as a solid piece with the treadle.

Q. What is the object of casting it in that form, that is to say, to make the arm and the treadle appear all in one piece?

A. They could not have it rest on the bearings and have the bearings in the leg, unless it had an arm. I know the old style of machine where the treadle was mounted on a tie-rod and held in place by cones and set-screws. In that case they are separate pieces.

Q. What objection would there be with that style of construction as compared to this other style of construction?

A. In that style of construction you have friction; you are working both the treadle and the rod. You are working the treadle around the rod, and of course there is a friction there, whereas with that treadle, there is no friction; it is simply rocking on an edge.

Q. That treadle, then, is an improvement over that old style of cones and set-screws?

A. Yes, sir.

Q. These arms, as I understand, in your machine, rest in a socket in the legs of the machine, do they?

A. Yes, sir; there is no vertical brace for them to rest in at all.

Q. Suppose by constant use and wear those legs were to spread apart a little bit. What would you do then to obviate that difficulty?

550 A. I do not consider that a supposable case. They could not spread apart.

Q. You have a tie-rod underneath connecting the legs ogether, have you not?

A. Yes, to hold the legs firmly together.

Q. You have a nut on each end to hold them together. If that nut should get loose from any cause, or from constant wear, and the legs should have a tendency to spread apart, what would you do then to correct that?

A. Tighten the nut. That would bring the legs closer together.

Q. Suppose the machines were operating when the nut was loose and the legs had spread apart to a certain extent. What would be the result then?

A. It would make a rumbling noise and disagreeable sound in running.

Q. In order to obviate that, you would go around with a monkey-wrench and tighten up the nut, and that would pull the legs together again?

A. Yes, sir.

Q. When you set up the machines, of course you set them all up in perfect alignment, with the nuts all screwed up tight and right, and that is the normal position for the working of the mechanism?

A. Yes, sir.

Q. When it gets out of that position, you bring it back to that position by tightening up the nuts, do you?

A. Yes, sir.

Q. Is it not desirable in sewing machines that the pitman should be parallel with the legs of the sewing machine? Is that not the proper position for it?

551 A. Yes, sir. It must be parallel with the leg.

Q. That, we will say, is alignment. We will use that expression. Suppose it gets out of that position, so that the pitman is at an angle instead of being parallel with the legs. What would you do then to obviate that?

A. We would put in a new one. It would not be in perfect order unless it hung so it would work perfectly easy with the rest of it.

Q. I presume in mechanisms of this kind, it is very desirable, and, in fact, essential to proper operation, that all the parts should be exactly true and in line?

A. Yes, sir.

Q. And when they get out of true and out of line, why, you then have to correct that, of course?

A. Yes, sir.

Q. Will you please take that model which is next to you there, which has been referred to as Plaintiff's Exhibit "P"? Do you recognize that style of treadle mount?

A. I should call that the Singer.

Q. What is the treadle mounted in there, and how is it mounted?

A. As near as I can judge, it is mounted on cones.

Q. You mean that there is a conical screw or bolt, do you, extending from the sides of the brace inward toward the treadle and resting in bearings or sockets in the ends of the treadle?

A. Yes, sir, as near as I can tell.

Q. Those pointed cones are inserted through the ends of the vertical brace, are they not?

A. It looks like it.

552 Q. I say, what would you say with regard to the efficiency of that style of mounting as compared with yours with knife-edge mountings?

A. I don't know enough about this to base an opinion upon. I think our machine is better than the Singer.

Q. Will you please turn that model upside down for a moment, and look — it in that shape? You recognize the vertical double cross-brace, do you not?

A. Yes, sir. That extends downwards and terminates in two ends or arms below, and the treadle is mounted by means of these point centers that we have been referring to, which are extended into the ends of that cross-brace.

Q. Can you state what is the object of mounting the treadle in that cross-brace there instead of mounting it in the legs?

A. I don't know.

Q. You prefer the other style of mounting, do you?

A. If I knew all about this, I might not. I don't know anything about this.

Q. Naturally, as agent of the Wilcox & Gibbs Sewing Machine Company, you are trying to sell as many of your machines as possible, are you not?

A. Yes, sir. I think they are a good style of machine. The Wilcox & Gibbs is a light-running machine. We claim some advantage in that respect over the other machines. That is one feature we put forward, as showing that our machines are more valuable than the others. The Wilcox & Gibbs was one of the early companies that went into business. They have a very large business.

Q. How does it compare with the volume of business done by the Singer Company?

553 A. I don't think it is nearly so great. The Singer Company is supposed to be the largest company.

Redirect examination of A. T. EGGLESTON.

Mr. WHEATON:

Q. In the knife-edge bearings used on the Wilcox & Gibbs machine, is there any rattle or any noise at all when the machine is in use?

A. No, sir, not when it is in use. Those knife-edge bearings are in the legs, in the leg casting. It rests entirely in the legs. That does not touch the tie-rod.

Q. Is there any tendency, where you use the knife-edge bearings, of the treadle to move endwise?

A. No, sir. The knife-edge bearings bear directly down, the whole length of them, in their bearings. The weight of the foot holds the treadle bearings firmly in place.

Q. Is this an old stand or a new one that you have brought here?
A. It looks like a very old stand.
Q. What is there in this to keep the treadle down, to keep it from lifting up?
A. The foot of the operator. That is all that is needed. I have known a tie-rod to get loose, but it is very rarely.
Q. Is it often enough so as to make it any objection to the machine?
A. Not unless it gets loose and rattles. It would take about half a minute to tighten it. Sometimes I have known the nut to get loose. The nut is liable to get loose unless it is thoroughly tightened, on anything.

554 Recross-examination of A. T. EGGLESTON.

Mr. MILLER:

Q. Has your company ever been called upon by the users of your machines to send an agent around to tighten them and readjust them?
A. We frequently have people send to have their machines repaired. We have the machines brought in and have it done. When they are brought into the office and shop, they are then fixed up and sent back again.
Q. Is it not a fact that the noise or rattling of the treadle in a sewing machine is a thing that it is desirable to avoid?
A. Yes, sir. I suppose all sewing machine companies endeavor to avoid that. I suppose one company will try to avoid it by one kind of construction, and another company by another kind of construction, according to the individual ideas of each man.

WILLIAM EDWARD JACKSON, called for the defendant, was sworn and testified as follows:

I reside in this city. I am a machinist. I have been in the sewing-machine business thirty years. I am dealing in the Davis machine. It has been upon the market about thirty years.
Q. How long has the Davis stand now produced been upon the market?
A. About ten years.

(The machine referred to was here introduced in evidence, and marked Defendant's Exhibit No. 14.)

Q. How is the treadle hung in this Exhibit No. 14?
A. It is hung on cone centers. There is a tie-rod underneath those centers that holds the legs together.
555 Q. Before this particular stand was made with this particular style of hanging the treadle, what kind of treadles were used in the Davis machine?
A. They were adjusted by cones hung on the treadle rod, similar to that one.
Q. I now show you another sewing-machine stand, and ask you what that is.

A. That is the Davis manufacturing stand; used at the present time just as you see it.

(The machine referred to was here introduced in evid-nce, and marked Defendant's Exhibit No. 15.)

Q. How long ago was that style of stand used by the Davis Company?

A. Over thirty years ago.

Q. How is the treadle hung in this Defendant's Exhibit No. 15?

A. It is hung on the tie-rod, with a cone on each side of it.

Q. Is the treadle hung in conical bearings?

A. Yes, sir; the cones are turned down conically. They are the ordinary conical collar that has been used in a great many different kinds of machines. The Davis machine, with stands made like Exhibit No. 15, is sold up to the present time in competition with other machines. Not in large quantities, compared with the other machines. They turn out about four hundred a day, I believe.

Q. What proportion of them have the same kind of stand that is shown in this Defendant's Exhibit No. 15.

A. I think probably one-quarter of them.

556 Q. State whether or not you have any trouble with the bearings of the treadle, as shown in Exhibit No. 15, getting out of alignment with each other.

A. I don't see how they can.

Q. Have you ever known an instance in any case where the bearings of this Davis treadle, as shown in Exhibit No. 15, have got out of alignment with each other?

A. No, sir; I have not.

Q. Have you ever had any trouble with the set-screws in these conical collars getting loose?

A. Well, they might get loose, but very seldom.

Q. Suppose these conical collars had got loose and slid away from the treadle. What effect would it have on the running of the machine?

A. It would not have any effect on the running of it. It might make some noise after you took your foot off the treadle. When a person is sewing and she keeps her foot on the treadle, it keeps the treadle in place anyway.

Q. Do you often trade new machines for second-handed ones, of this Davis style?

A. Yes, sir.

Q. What experience have you had as to seeing those tie-rods on second-handed machines worn from use?

A. They will wear, occasionally. It is caused by running the machines without oiling, principally.

Q. I am speaking of the wear on the tie-rod itself, and not on the cones. Have you had those tie-rods come back showing that the cones have got so far out of place that the treadle had been oscillated directly upon the tie-rod.

A. Yes, sir; I have seen it. It would just cut a groove on the

treadle, the width of the bearing. I have seen them occasionally.

557 Q. As this bearing is in Exhibit No. 15, is it a noisy running stand or treadle?

A. No, sir; just as quiet as any of them.

Cross-examination of WILLIAM EDWARD JACKSON.

Mr. MILLER:

Q. What kind of bearing is there in the pitman of this machine, Defendant's Exhibit No. 15?

A. On one end is the ball joint. On the other end is an ordinary hole bored in the wood.

Q. By "the ball joint," you mean a ball operating in a spherical-shaped cavity?

A. Yes, sir; cups.

Q. What was the object of that construction?

A. Well, it runs lighter, and it prevents any twist in the pitman. We consider it quite an improvement over other styles of joints. It makes the machine run lighter and with less friction, and also obviates the difficulty that would otherwise occur if the pitman should get out of line with the legs.

Q. It is desirable in a sewing machine that the pitman should be parallel with the legs, and that is the normal position, is it not?

A. Yes, sir.

Q. Suppose it were to get out of that position from the shifting of the treadle, or from any other cause, what would be the effect on the running gear?

A. If it was out very much, it would make the machine bind, make the stand bind some. It would not run as easy. You would have to adjust the treadle back to its original position, if it got out of its original position.

558 Q. If, instead of this ball bearing in the pitman rod, the common round-pin bearing, one that did not give or turn or bend as this ball bearing does, were used, what would be the result if the pitman were to incline a little at an angle?

A. A little would not make any difference, but if it got out of alignment considerable, it would make the stand bind.

Q. In order to overcome that, you put this ball bearing in the pitman rod?

A. That was their idea, I suppose.

Q. You are familiar with the old style used by many other sewing machines, of mounting the treadle on the rod and holding it in place by means of cones and set-screws, are you not?

A. Yes, sir.

Q. Suppose the set-screws were to get loose from any cause. What would be the effect on the cones?

A. They would probably move. They would shift from their normal position.

Q. Is there any wear on the surface of those cones?

A. Oh, yes, some. It only wears on the top side.

Q. So that the cone would then be changed from its normal shape of a perfect cone to one which had a somewhat flattened top to it?

A. Yes, sir.

Q. Would it be a detriment to it?

A. Well, no, I don't know that it would; it would not improve it, but I do not know that it would be any detriment. I don't know that it would be necessary to do anything. The machine would run all right. It would be just as good as it would before.

559 Q. Why is it that you want to have a perfect cone in a machine when you first set it up, if a flattened one is just as good?

A. You can turn up a cone that is flat on one side.

Q. Suppose your set-screws were to get loose and the cones were te wear to a considerable extent. What would you do to the machine then?

A. I would set the cone up to where it was originally.

Q. And as fast as it got out of position, you would continue to set it up in its proper position?

A. Yes, sir.

Q. Is not a treadle mounting preferable where it is impossible for that thing to occur?

A. Yes, sir.

Q. What style of machine do you put this model on that is shown here in Defendant's Exhibit No. 15?

A. On the manufacturing machines the largest style of machines used. Those are the large machines that are used in manufacturing establishments by workmen. We do not put those on family machines, that are adapted to be used by ladies. We formerly put it on that style of machine, and now we have changed to the other style of machine for family use.

Q. What was it that induced your company to make that change?

A. Well, I think probably it is like a good many other companies—they make a change simply for a talking point in selling machines. The noise would be just the same on the other stand, provided it worked.

Q. Why is it they made the change in the family machines, and did not make the change in the manufacturing machines?

560 A. Because I think the people that use the manufacturing machines are more practical. If you sold a machine to a lady, you could tell her, "This is a new style and that one is old style," and thereby make a sale. But you can't do that with the manufacturers.

Q. There was a demand, then, among manufacturers, for machines containing the style of mounting of this Exhibit No. 15, was there? The people wanted a different style of mounting from what is shown in this Exhibit No. 15, and in order to meet that demand, you produced that machine for family use known as Exhibit No. 14, which was first shown you. That is a fact, is it not?

A. I don't know that the public wanted it. The company simply made the machine as a talking point. As a rule, the public do not look at stands much when they are buying machines.

Q. Do you not represent that this very style is a noiseless machine, to your purchasers?

A. Yes, sir.

Q. And that is used as one of the inducements for them to purchase it, is it?

A. Generally, you know, the machine is sold on its merits as a sewing machine and on the work that it does, and not on the running of the stand.

Q. And that adds one feature to your machine that induces them to purchase it, does it not?

A. Yes, sir.

Q. In the case of a manufacturing establishment, it is not so desirable for selling a machine, that they should be noiseless?

561 A. No, sir; but it is a fact that they are. That stand is just as noiseless as the other one. Occasionally they will object if a machine is too noisy. Sometimes that happens even with the manufacturing establishments, that they also want a noiseless machine. So far as the families are concerned, it is almost invariable that they want a noiseless machine. The quieter a machine runs, the better, of course. We claim that our machine is a noiseless machine, our family machine.

Q. What is there in it that makes it noiseless, what construction?

A. Simply the construction of the machine. The bearings in it have something to do with making it noiseless. They add to that feature of the machine.

Q. How is the treadle mounted on this family machine?

A. On point centers, somewhat similar to the point centers of the Singer machine.

Q. Just look at the model, Plaintiff's Exhibit "P," which is beside you, and see if you recognize that as the Singer machine.

A. Yes, sir. We use substantially the same kind of point centers that the Singer uses.

Q. And the difference between your mounting and the Singer is, that you mount your treadle in the legs of the machine without any vertical cross-brace, and they mount theirs in the vertical cross-brace, do they not?

A. They mount theirs in this bar, this cross-bar.

Q. That is part of the vertical brace, is it not?

A. Yes, sir. It is all cast in one piece, combination brace and cross-bar. They do not mount that treadle in the legs at all.

562 Q. They claim an advantage from mounting the treadle in this brace instead of mounting it in the legs?

A. The advantage is in setting up the machines, not to the user. When you once put that treadle in and adjust it, the act of screwing the stand to the table does not set the treadle tight or loose again, does not bind the treadle. It does not affect the treadle at all. The treadle sets right there in that position all the time after it is fixed, unless it wears out.

Q. And that is because they have mounted it in that way, as shown in this model, Exhibit "P," is it not?

A. Yes, sir.

Q. And you do not recognize that as an advantage in setting up the machine?

A. Yes, sir; it is easier to set it up in alignment at the first start. You have to adjust it all right, nicely adjust it. But when it is done, screwing on the table does not affect it any, which it might do if the centers were on the legs, so that it is more easily set up in proper order than the other style.

Q. I suppose there is a great deal of competition in the sewing-machine business?

A. Yes, sir, each company claims to make somewhat different a style of machine of some particular merit. Some companies stick to old ideas and do not change at all; still claim that theirs are just as good as the machines with modern improvements. The changes are not always improvements. They claim that the changes are improvements. They use them as an argument for selling their machines.

563 Q. What was it that you said about screwing the table onto the frame a moment ago, in the style where the treadle was hung in the leg?

A. In screwing the table on, you may twist the leg a little. The table goes over those legs.

Q. In screwing that table on, unless you are very particular, you may twist the legs one way or the other, may you not?

A. Yes, sir, it may occur. It might bend the treadle rod, or make it loose—either make it tight or make it loose. And then you would have to go and adjust the treadle so as to get it in proper position.

Q. That could not occur where the treadle is mounted in the vertical brace, which has no connection with the table, could it?

A. No, sir; it could not occur in that style.

Q. In that respect the style of machine there would be an improvement over the other, would it not?

A. Yes, sir; in that regard.

Redirect examination of WILLIAM EDWARD JACKSON.

Mr. WHEATON:

Q. Are there any ball bearings in this particular machine?

A. No, sir.

Q. I show you a rod here and ask you if you know what that is.

A. Yes, sir. That is an old treadle rod.

(The rod referred to was here introduced in evidence, and marked Defendant's Exhibit No. 16.)

That probably was run for twenty years. Originally it was just a round rod.

564 Q. Are those grooves or notches shown in that treadle bar just as they were worn by the bearings of the treadle?

A. Exactly; yes, sir.

Q. In order to do that wearing, were the conical collars shoved endwise on the rod so that they did not serve as bearings any more?

A. Yes, sir.

Q. Would a machine run like that run noiselessly and do good work?

A. That would run all right. The reason that rod was taken out was that it had worn so badly that it was weak and had bent. That is the only reason it was replaced with a new one. That is a rod that came back to us in the course of our dealings. We put on a new rod in place of that, because it was so weakened by wear that it was bending. That was worn in the Davis machine.

Q. And even with all that wearing, were the treadle bearings out of alignment with each other?

A. No, sir.

Q. What part of the machine is it that makes the principal part of the noise when it is in operation, sewing?

A. The shuttle makes the most noise as a rule. That is the part of the mechanism that takes the stitch.

Q. In any of these machines, have you ever known the rattle of the treadle that would be enough to drown the noise that would be made by the stitching part of the machine?

A. No, sir; not while you are sewing on it.

Q. In going into a factory where there are a large number of these machines at work, do you hear a great deal of noise made by the mechanism that takes the stitching? 565

A. Yes, sir; the shuttle makes it.

Q. Will you hear any noise at all made by the treadle, as a rule?

A. Very little.

Mr. WHEATON: Here is still another stand.

(The stand referred to was here introduced in evidence, and marked Defendant's Exhibit No. 17.)

Q. What if anything, have you had to do with stands such as are shown in Exhibit No. 17?

A. I have sold some of those, and repaired quite a number of them. I don't know when they first came in use.

Q. How is the treadle hung on this?

A. On point centers running through the leg—through that cross-bar. It runs through the leg and through the cross-bar. The cross-bar is right underneath the treadle. The treadle is hung on the point centers that run through the leg and the cross-bar, both. There is a thread cut in the end of that cross-bar. The cross-bar acts as a brace underneath the treadle.

Q. Is it possible for the bearings of that treadle to get out of alignment with each other?

A. No, sir.

Q. Would they get out of alignment if those point centers should wear on which they are hung?

A. No, sir.

Q. Which would hold the treadle the more firmly: This cross-rod with the treadle hung in it as shown, or to have the vertical ends of the cross-brace continued on down—leave out the cross-

bar and hang the treadles in the lower ends of that vertical brace?

566 A. I think that would, the cross-bar.

Q. Suppose in this Exhibit No. 17 the cross-bar was taken out, and the lower ends of the vertical cross-brace should be continued down on each side below the treadle bearings and the bolt should be put through the legs, and the lower ends of the vertical cross-brace, so extended the same as they are now, put through the legs, and the end of the cross-bar: Would that be as strong a connection of the legs and treadle as is now shown in this Exhibit No. 17?

A. Yes, sir; I think it would.

Q. Would there not be more liability to spring on the part of the cross-brace than there would in this cross-bar, on account of the brace extending round in part of a circle while the cross-bar is in straight alignment?

A. I believe that is the stiffest brace that I know of. I mean the cross-bar underneath.

Recross-examination of WILLIAM EDWARD JACKSON.

Mr. MILLER:

Q. What did you say was this rod that you produce here, Exhibit No. 16?

A. That is a treadle rod of an old Davis machine. I took it out of a stand, probably two months ago, a Chinaman's machine, because it is bent, not as much as it was. My boy straightened it. When I took it out, it was bent considerable by being weakened—wearing in that way. The weight of the Chinaman's foot running the machine naturally bent it. The Chinaman had been using the machine for probably twenty years, in manufacturing. The

567 constant weight and pressure of his foot there had bent this treadle rod. It was bent down within half an inch of the floor, I think. The bearings were about an inch from the floor before it was bent.

Q. He sent for you and requested you to do it?

A. He brought the machine to the shop. I straightened up the rod, straight enough to get the cone on. I could not get the cone on in the bent condition. I put the new cones on after I straightened it up. These are not the old ones. They are on the new rod on the original machine. These are new cones.

Q. If your treadle had not been mounted on this rod at all, but mounted in the legs or vertical brace, the pressure of the Chinaman's foot would never have been exerted on the rod. If the rod had been there, and the treadle mounted in the brace, the rod would have stayed there as long as the machine lasted?

A. It ought to.

Q. And the treadle would have been kept in a position where it was placed without regard to the rod at all?

A. The same thing may have happened if it was on centers. Centers wear.

Q. What I am getting at is, in the case where the treadle is not mounted on the rod at all, you would not have met with the difficulty that the Chinaman met with?

A. No, sir. You probably would have to put in new centers.

Q. These are new cones that are on this rod now?

A. Yes, sir.

568 Q. Look at this machine which you spoke of a moment ago, which is marked Defendant's Exhibit No. 15. Did I understand you to say there was no ball bearing in the end of the pitman?

A. It is a ball joint; simply one ball. It is a spherical ball, working in a socket. That kind of a bearing is in this rod. It consists of a ball on one piece, working in a spherical or cup-shaped socket on the other piece. That is to compensate for the vibration of the pitman, if it goes backwards and forwards out in a straight line, and also to take up the *ware*. So that is an adjustable bearing up there.

Q. If the pitman should get out of line, you could adjust that by that apparatus which you have there?

A. Yes, sir.

Q. Is this Exhibit No. 17 one of the machines that is being sold by your company?

A. No, sir; that is being sold by the National Sewing Machine Company, of Belvedere, Illinois. Our company has nothing to do with this style of machine. I first saw this machine four or five years ago. That machine is on the market, being sold by the National Company.

Q. I understood you to say that this was a better style of mounting of treadles than the one in your own machine.

A. No, sir; I say it is a very strong brace. I think it is stronger, perhaps, than is necessary. It is the strongest brace that I know of.

Q. This treadle is mounted in a cross-brace, with ends turned down and point-center bearings, is it not?

A. Yes, sir.

Q. It is impossible for those two bearings to move sideways?

A. Yes, sir.

569 Q. This will always be kept at a fixed distance apart?

A. Yes, sir.

Q. It is impossible for them to get out of line with each other?

A. Yes, sir.

Q. Look at Exhibit "P," and say if the same thing is not true of that style of mounting, where the treadle is mounted in the brace?

A. Yes, sir, I do not see that that could get out of alignment, either.

Q. So that that one, Exhibit "P," has exactly the same style of mounting that this one, Exhibit No. 17, has?

A. Practically the same; yes.

Q. In this machine, Exhibit No. 17, the end of the vertical brace is attached to the legs at some distance from this cross-bar that carries the treadle?

A. The brace proper; yes.

Q. And if the ends of the cross-brace that carries the treadle were

extended down and form a part of and were cast with the end of the vertical brace, it would all be in one piece, and would be exactly the same as in Exhibit "P," would it not?

A. Yes, sir.

Q. Do you say that the fact that the end of the cross-brace is not attached to the end of the cross-rod that carries the treadle, makes no difference in the bearings at all, or in keeping them in line?

A. No, sir; one would be just as good as the other, as far as keeping them in line.

Q. When was the first time you ever heard of a machine like Exhibit No. 17 being on the market?

A. About five years ago.

570 Further redirect examination of WILLIAM EDWARD JACKSON.

Mr. WHEATON:

Q. I notice you have called this lower cross-bar a brace. Is it a fact that every tie-rod that goes through between the legs and screwed with a nut at each end is also a brace?

A. No, sir. It acts as a brace. I should call it a cross-bar.

W. R. EVANS, called for the defendant, was sworn and testified as follows:

Mr. WHEATON:

Q. Mr. Evans, what is your occupation?

A. I am connected with the Domestic Sewing Machine Company in a varied capacity. I am assistant in the office. My principal occupation just now is book-keeping, and looking after the office in general.

Q. Please state whether, in that Domestic machine, you ever knew of the treadle bearings getting out of alignment with each other.

A. No, sir; it would not be possible, as that machine is constructed. Not unless the treadle rod should become bent.

Q. Has there ever been any objection to that machine on account of any noise created in the treadle connections?

A. Yes, sir; somewhat, with the old style, when the cones become loose.

571 Q. When the foot is on top of that treadle, running that machine, even when the cones are loose, does it make any racket?

A. If run very carefully, no, sir.

Cross-examination of W. R. EVANS.

Mr. MILLER:

Q. Suppose you do not run it carefully, what then?

A. It will make a noise.

Q. And that will be an objectionable feature?

A. Yes, sir, somewhat.

Q. Was that the reason why your company changed from that old style to its present improved style?

A. I think so.

Q. They found it was desirable to make that change, did they?

A. Evidently.

Q. They have sold quite a number of the new machines since? They are supposed to be noiseless?

A. Unless there is wear. Wherever there is wear, there will be noise. The wear would occur on the bearings. I cannot say that we have had much trouble in that respect with the present style. The present style is an improvement over the old style in that respect.

Redirect examination of W. R. EVANS.

Mr. WHEATON:

Q. What part of the mechanism of the entire sewing machine is it that makes the most noise as the machine is operating?

A. All things being in good condition, the shuttle, I should say. It is the part of the machine that does the stitching that makes the noise. The stand should make no noise when it is set up properly.

572 Mr. MILLER:

Q. If the stand is not set up properly, noise would occur?

A. Certainly.

Q. It is desirable that all these parts should be in line with each other, so that they will run smoothly?

A. Yes, sir; the same as with machinery, I suppose.

Mr. WHEATON:

Q. Is it not a fact that in all these improved machines, the machines are almost invariably set up properly when they are first put at work?

A. Yes, sir.

Q. Has there ever been any trouble, to your knowledge, growing out of the fact that the machines were not set up properly—any kind of machines?

A. Well, as far as my experience goes, very little, if any. Careless men will sometimes do such things, I suppose. It is supposed not to be.

Direct examination of JOHN A. MACMILLAN (resumed).

Mr. WHEATON:

Q. When the Singer Sewing Machine Company received the first consignment of the Diehl treadles here in San Francisco, what was the condition of their stock on hand of the "trade-mark" stands?

A. We had quite a lot of them; a good many; a big stock.

Q. How long after that consignment of the Diehl treadles reached San Francisco before they were put into machines and put on the market for sale?

A. I could not state.

Q. Do you know whether they were put on the market and sold as soon as they got here, or not?

573 A. No, sir; they were not.

Q. When do you say the first consignment of them reached San Francisco?

A. April, 1886.

Q. Now, was it possible that any of the Singer Company machines with the Diehl treadle in it could have been sold in Tuolumne, or any other county of the State outside of San Francisco prior to April, 1886?

A. It might be possible, but not through our house; not through us. There were none to my knowledge.

Q. Have you ever known of any of those Diehl treadles being sold in California on the Pacific coast, except through your house, as you speak of?

A. I do not know of any.

Cross-examination of JOHN MACMILLAN.

Mr. MILLER:

Q. What designation is used for these machines that contain this brace we are talking about, like Exhibit "P"? What are those machines called?

A. They came out with the Improved Family style. That is the name of them, commonly known amongst us, as 1887 stands. That is the name for them—Improved Family. That "Improved Family" is designated by the letters "I. F.," for brevity. Wherever in the books the letters "I. F." occur, they stand for "Improved Family."

Q. Of the same style of brace as this Exhibit "P"?

A. Of that style, or any other style. You could put that "I. F." on any stand you want to.

Q. You are familiar with this stand of the style shown by Exhibit "P"?

A. Yes, sir; that is the first "Improved Family" stand we got.

574 Q. Do you know when your company first commenced to advertise that stand on the Pacific coast?

A. No, sir.

Q. I will show you one of the catalogues of the Singer Manufacturing Company of 1885, and ask you if you do not find upon page 24 a representation of that stand, the same as Exhibit "P."

A. That is that portion of the stand.

Q. Now, that catalogue is a catalogue showing the style of machines that the Singer Company were selling and offering for sale at that time, is it not?

A. I presume it is. That is our book. I recognize that.

Q. You see in that book that you were advertising this stand as early as 1885, do you not?

A. That is it.

Q. What books of the Singer Company did you examine before coming into court to ascertain when they first got their stands here that we have been talking about?

A. The invoice books. I am not the book-keeper. Mr. Chandler asked me to ascertain when we got them. I went to work, I found the consignment, and I found I checked off such bills and signed my name to such a date, April 14, 1886. I received the consignment on that day, as my signature showed. I received several hundred.

Q. Did you examine any books prior to that time?

A. Yes, sir; I examined that same book as far as it went. It began in January, 1885.

Q. Did you examine any books prior to January, 1885?

A. No, sir.

575 Q. Your testimony now is given on the facts that you take from the books that you did actually examine?

A. Yes, sir.

Q. If it was not for the book and the fact that you read the entry in the book, you could not remember it alone as being the 14th of April, 1886?

A. No, sir; I could not remember the date. I was pretty sure of the year.

Q. The upshot of the whole business is that you found in these invoice books an entry on April 14, 1886, showing you received several hundreds of these stands, and you did not examine any books prior to the year 1885?

A. That is it.

Q. It is a fact, is it not, that the designation of this style of treadle mounting, as shown in this catalogue here that I have just handed you, that it is called the Improved Family?

A. Yes, sir. For brevity, they use the letters "I. F." in the books. So that where the letters "I. F." occur, it refers to the mechanism of the machine.

Q. In this catalogue I have just shown you, of 1885, you find a picture, do you not, of this Exhibit "P"?

A. That is it.

Q. Now, Exhibit "P" is a stand with a treadle mounted in it and no other part of the machine?

A. It is a combination brace with a treadle in it; a bearing wheel, and a pitman.

Q. That belongs to the Improved Family machine and goes with the Improved Family machine, does it not?

A. Yes, sir, and every other kind of machine. It could be put on any other Improved Family machine.

576 Q. Wherever there was an Improved Family machine of the Singer Company, it had this brace on it?

A. No, sir; we sold them with a New Family brace.

Q. Afterwards you sold them with the Improved Family brace?

A. We sold them with this stand.

Q. This particular one is called the Improved Family brace, is it not?

A. That is the latest machine we have at the time, and of course

that stand went with it. We sold several of them before we had this stand; hundreds and thousands.

Q. What did you sell them on?

A. On the trade-mark stand. That was called the New Family style. That would be "N. F." for "New Family."

Q. When this one came in, you called that the Improved Family?

A. Yes, sir; we had no special name for it. It was billed as the Improved Family, or "I. F." That took the place of the New Family.

Q. I have examined several of the books of your company also, and I want to show them to you. Here is a book called "Abstract of Sales of the Singer Sewing Machine Company." This book shows the sales of the Singer Company in the different parts of this State?

A. Yes, sir.

Q. In the first column you find the date of the sale. In the next column you find the person to whom the machine was sold or leased. The next column the style of the machine?

A. Yes, sir.

577 Q. On page 21 I see account of machines sold by R. S. Robinson, agent at Stockton, San Joaquin county, Cal., and in the first column I find, "1885, April 18, Grippee C. I. I. F. ex. finish." What is that?

A. Improved Family, extra finish.

Q. Going straight down under there, I find, under date of April 25, May 2d, May 9th, May 16th, May 23d, May 30th, June 6th, June 13th, June 20th, June 27th, July 4th, and July 11th, the sale of the same kind of machine, Improved Family, extra finish. Those machines appear, according to this book, to have been sold at those dates?

A. Yes, sir.

Q. Did you examine this book when you examined the other?

A. No, sir.

Q. This is something new to you?

A. Yes, sir.

Q. I find on page 29, the very first entry, account of machines sold to T. H. Litchfield, agent at Stockton, May 25, 1887, Gerlach G. Improved Family, extra finish. That is right?

A. Yes, sir.

Q. That appears to have been sold to him?

A. Yes, sir.

Q. And the number given in the machine is 5,565,688, is it not?

A. Yes, sir.

Q. Underneath I find, May 16th, sale of a machine to Bowlay, F. H., Improved Family, extra finish, No. 5,583,977.

A. Yes, sir; that is right.

Q. It appears, according to those entries, that those machines were sold to that man as early as May, 1885, does it not?

A. Yes, sir.

578 Q. Running down the column, I find, under date of June 6, 1885, sale of machine to D. C. Turner, Improved Family, drop-leaf. What kind of machine was that?

A. That is a drop-leaf table with two drawers in it. The letters "D. L." refer to the style of the wood. The "I. F." refers to the style of the machine.

Q. On that same page, under date of September 19, 1885, I find the sale of one machine to M. Gibbon, Improved Family, drop-leaf, No. 6,445,814. That appears to have been the sale at that date of that style of machine also?

A. Yes, sir.

Q. On page 37, I find, under date of February 23, 1884, the sale to H. Hendrikson, by the agent at Napa, of a machine entitled, "Improved Family." What kind of machine was that?

A. That is only the head. I cannot say what it was. The entry says, "Improved Family." The other entry says that the price was $70.

Q. At what price did they sell these Improved Family machines?

A. They range from $65 to $85.

Q. Under date of April 5th, I find a sale to M. C. Lycan, of another Improved Family machine, price $70. That is the same style of machine as the other, I suppose?

A. According to the entry, it ought to be.

Q. On page 38, do you not find an entry there showing the sale of two improved machines on September 13, 1884, to A. P. Overton and W. H. Clink, price $70 each?

A. Yes, sir.

Q. Now, do you not find, upon page 40 of this book, under date of March 21, 1885, the sale of an Improved Family drop-leaf machine, price $70, to A. Meyers?

A. Yes, sir.

579 Q. Do you not also find, immediately underneath that, on the same date, sale of a similar machine for the same price, to W. W. Ferris?

A. Yes, sir.

Q. Do you not find, further down on the page, still under date of June 4th, of another Improved Family; and under date of July 11th, still another; and under date of July 18th, still another, to different persons, the price of one $70, another one $75, and another one $70?

A. Yes, sir.

Q. On page 41, do you not find the very first sale there mentioned, under date of August 8, 1885, an Improved Family, drop-leaf machine, to S. Marsich, price $70?

A. Yes, sir.

Q. Do you not find, under date of January 23, 1886, the sale of an Improved Family, drop-leaf machine, price $70?

A. Yes, sir.

Q. Now, on page 42 of this book, do you not find, under date of March 13, 1886, the sale of an Improved Family, extra finish machine to G. Hill, and do you not find, under date of April 10th, the sale of a similar machine to M. Hathaway, for the price of $70? And under date of May 29, 1886, the sale of a similar machine to Rosa Shaver, price $75?

A. That is right.

Q. That is as far as I have gone through this book. I have not gone any further than page 53, but you find, as far as I have gone, there have been sales of this machine, under this designation of "Improved Family," as early as 1884, do you not?

A. I think so; yes.

Q. And you did not examine any books in your office prior to January 1, 1885, did you?

A. No. sir.

580 Q. And the testimony you have been giving as to the sale of these machines, so far as you have gathered it, is from the books?

A. No, sir; when I received a certain stock.

Q. That testimony as to when you received this certain stock is given on the theory that you found that entry in the book, under date of April, 1886?

A. And that I did not find any of this stock previous to that, of this kind of stand.

Q. But you did not examine the books prior to January, 1885, in order to ascertain?

A. No.

Q. And this book which I now have shown to you was not given to you at that time, was it?

A. No, sir. I referred to the books that went through my own hands; my own checks.

Q. Do the machines all come directly to San Francisco, or do they ship some into the interior from the East?

A. All come to San Francisco that are shipped to us; that is, for our district, the northern part of California, and are distributed by us.

Redirect examination of JOHN A. MACMILLAN.

Mr. WHEATON:

Q. To what was the term "New Family" machine applied by the Singer Company?

A. To the trade-mark stand with a New Family band wheel in it.

Q. Was the term "New Family" machines applied to the head of the machine, without regard to what kind of a stand it was on?

A. It is an application to the head. If that particular

581 head was put on any kind of a stand, it would still be a New Family machine. The same is true as to the Improved Family machine, in the same way. That expression was applied solely to the head of the machine.

Q. There have been some changes made in the head of the machine that causes those changes in the name of the head?

A. It is a different machine altogether; a different motion and everything.

Q. We will call this the trade-mark stand, so that, in reading the

record, we will know what you are talking about. While you were using the trade-mark stand, the Improved Family machine had not yet been made?

A. Not to my knowledge. We were using the stand prior to having the machine. We had that stand before we had the Improved Family machine.

Q. What kind of heads were sold on this trade-mark stand?

A. Improved Family machines, and New Family machines for a long time. The New Family machine was the older machine of the two. That New Family machine was sold on this trade-mark stand. Also the Improved Family machine was sold on that.

Q. After you commenced with the Improved Family machine, was that also sold on this stand?

A. Yes, sir; only changing the hand wheel.

Q. In other respects, was this trade-mark stand, on which the Improved Family machine was sold, just as it is now?

A. Yes, sir.

Q. Do you know how long you continued to sell the Improved Family machine upon this trade-mark stand?

582 A. I could not tell exactly, but I am of the opinion that to the end of 1886, or beginning of 1887.

Q. In the items which Mr. Miller has pointed out in the defendant's book before you, does that book tell what kind of a stand those Improved Family machines were sold upon?

A. No, sir.

Q. Then, by examining that book and all of those items, you cannot tell anything about what kind of a stand was used in the sale of those machines?

A. No, sir.

Q. What recollection have you as to the consignment of those Diehl stands that you have mentioned, that was made in 1886 to San Francisco?

A. I recollect we got a big consignment of them. I had the handling of those stands. I checked all the bills off, signed the papers and sent them back to the office. That particular consignment of stands was new to me. I don't remember seeing any of them before.

Q. What do you say was the reason that the company here did not immediately commence selling those Diehl stands as soon as they arrived here?

A. I remember that we got that large consignment on account of freight rates. We loaded ourselves up with stuff that year on account of freights being low, and there was a prospect of freights being raised. We got a large lot of stock out, six car-loads. In that consignment of goods, there were both Diehl stands and also more of the trade-mark stands.

Q. Do you know whether it was an object to the Singer Company to work off their trade-mark stands before they commenced the Diehl stand, or not?

583 A. I don't know if it was an object or not. We always work off our old stock before starting in with a new lot. It

was a rule of the house, and is yet. We keep it up to this day. We keep it up all the time.

Q. Putting your recollection and memory of actual facts, that is, your actual recollection with that date which you found on April 14, 1886, when that consignment was received, can you state positively, whether that consignment included the first Diehl standard that had come to San Francisco?

A. I can state it was the first that I knew of, that I had seen.

Recross-examination of JOHN A. MACMILLAN.

Mr. MILLER:

Q. There was another catalogue that I will show you now. It is Plaintiff's Exhibit "K." I call your attention to a picture of the machine on page 7. That is a picture of the Improved Family machine, is it not?

A. That is a picture of an Improved Family machine, on a three-drawer woodwork, on a stand like Exhibit "P." That is an Improved Family machine (pointing).

Mr. WHEATON:

Q. What do you point to?

A. To the head.

Mr. MILLER:

Q. The stand on that Improved Family machine is a different kind of a stand from what is on this trade-mark stand?

A. Yes, sir.

Q. So that with the Improved Family machine, the style of stand that goes with it is shown in that picture, is it not?

A. Yes, certainly.

584 Q. And the printing says, "The above cut shows the new patented and light-running stands on which all our Family machines are mounted." You see that printing there, do you not?

A. Yes, sir.

Mr. WHEATON: I want it to go in the record that this last catalogue is a catalogue of 1889, and is marked Exhibit "K."

Mr. MILLER:

Q. There was a picture also in the other catalogue, Plaintiff's Exhibit "L," of 1885, on page 3. On that page you find another picture, do you not?

A. Yes, sir. This picture on page 3 of this catalogue represents the Improved Family machine. That has the same stand as this Exhibit "P." It has a different stand from this trade-mark stand. This catalogue is dated in 1885. This picture is practically the same representation as the one in the catalogue of 1889, so far as the style of machine is concerned. The two cuts were intended to refer to the same machine.

WEDNESDAY, *April* 11, 1900.

JOHN A. MACMILLAN, recalled for defendant.

Mr. WHEATON:

Q. In searching your invoice books for consignments from the East, why did you not search further back than the 1st of January, 1885?

A. They were destroyed. We sent them to the reduction works, and burned them up—all previous records.

Q. You have testified that the New Family machine was sold on the trade-mark stands. Were those New Family machines ever sold on the Diehl stands?

A. No, sir.

585 Q. Were any of those New Family machines ever put in the same machine that had a Diehl treadle in it?

A. No, sir.

Q. The later Improved Family machines—what means have you of knowing to what extent they were sold upon the trade-mark stand?

A. By receiving the machines, by our consignment bills with the machines complete, excepting band wheels, treadles and cross-braces, and receiving at the same time a wheel for every Improved Family that was sent to us, a larger wheel to go in that trade-mark stand.

Q. Have you any memorandum that shows what receipts there were of the Improved Family machine in 1885?

A. Yes, sir; I think I have.

Q. What book did you bring here this morning?

A. The invoice book. That will show the receipts of the stands.

Q. Just produce the book and testify from that.

Mr. MILLER:

Q. What is that book that you have there?

A. The original bills from New York. It begins with January, 1885. It goes to December 31, 1888.

Mr. WHEATON:

Q. At what date was the first receipt of the Improved Family sewing machines in January, 1885?

A. They were billed from New York, January 23, 1885. They were received here in San Francisco, February 14, 1885, when I checked them off, and sent the papers back to the office and signed them.

Q. How many Improved Family sewing machines were in that consignment of January 23, 1885?

586 A. 360.

Q. What else, if anything, came in that consignment that was to be used in connection with those Improved Family machines?

A. The parts to change them from a trade-mark stand to Improved Family stand. Three hundred and sixty band wheels came.

Q. Were there any other parts of the stands for those Improved

Family machines that came in that consignment except the new band wheels?

A. Not part of the stand but the woodwork, a table, a set of drawers, and a cover.

Q. I show you a heavy band wheel and pitman, and ask you if you know what it is.

A. It is a band wheel to change a trade-mark stand with a New Family wheel in it, to an Improved Family wheel. From a New Family wheel to an Improved Family wheel.

(The wheel and pitman referred to were here introduced in evidence and marked Defendant's Exhibit No. 18.)

Q. Is this Exhibit No. 18 one of the band wheels that came from New York, and which was to be used on the trade-mark stand when the Improved Family machines were sold, with the stand, in place of the lighter band wheel already in use?

A. Exactly the same kind.

Q. Do you know how many of the trade-mark stands the company had on hand here in San Francisco at the time of that consignment?

A. No, sir, I could not tell how many. I know we had a big stock. Several thousand.

587 Q. In that consignment of January 23, 1885, were there any treadles of any kind?

A. Not with the Family machines, but there were manufacturing treadles. I name the cylinder for one, which was a wider treadle, a wider brace; a different treadle altogether. Those machines came complete, consequently they had the treadle.

Q. Were there any Diehl treadles in that consignment?

A. No, sir. This book says, referring to the Improved Family machines, "All of above complete except stands." So it was woodwork and heads.

Q. Where is the company's place of business at this time here in San Francisco?

A. The office is in the Crocker building, and the store and works are at 22 Post street.

Q. Do you know when the company moved its store and works to 22 Post street?

A. In July, 1885. We were moving then. I don't know whether we finished moving or not. We started moving in July, 1885, to the best of my recollection.

Q. Please look at the circular which I now show you, and state what it is, if you know.

A. It is the Singer Manufacturing Company's circular with different kinds of machines. It is an Improved Family machine, in the first place, with a New Family trade-mark stand on it.

588 The COURT: For what purpose do you offer this in evidence?

Mr. WHEATON: For the purpose of showing that these Improved Family machines were sold on the trade-mark stands, and were so

Defendant's Exhibit 19

EVERY GENUINE SINGER MACHINE HAS THIS TRADE MARK ON ARM AND STAND

THE SINGER MFG. CO. N.Y. TRADE MARK

PRICE LIST.

MONTHLY PAYMENT PLAN.

Improved Family, plain table	$60 00
" " drop leaf and cover, two drawers	70 00
" " drop leaf and cover, five drawers	75 00
" " open cabinet case	90 00
" " drop cabinet case	100 00
Improved Manufacturing Machine	70 00
" " " large table	73 00

A liberal discount will be made on above prices for cash

Three-Quarters of all the Sewing Machines sold throughout the World Last Year were

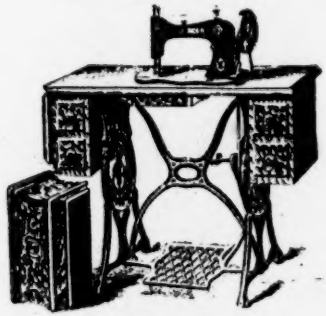
"GENUINE SINGERS."

THE

IMPROVED FAMILY SINGER MACHINE,

WITH OSCILLATING SHUTTLE.

FIVE DRAWER MACHINE.



A FAVORITE STYLE.

THE SINGER MANUFACTURING CO.,

34 UNION SQUARE, NEW YORK.

GENERAL AGENCY FOR THE PACIFIC COAST,
22 POST ST., SAN FRANCISCO.

AGENTS AND BRANCHES EVERYWHERE.

1996 589

A COMPLETE SET OF ATTACHMENTS

Given with each Singer Machine.

TWO DRAWER MACHINE.

IMPROVED FAMILY

WITH OSCILLATING SHUTTLE.

This machine is confidently recommended to the public as the best machine ever introduced for very fine work in families. It has a very high arm, allowing greater space for work, will do the most beautiful stitching while running at the highest speed, has a perfect tension, and is very light running.

A large amount of money and the greatest mechanical skill were employed for many years in the experiments and tests which resulted in the production of the IMPROVED FAMILY MACHINE. By its peculiar construction, it draws the needle thread both down and up while the needle is out of the goods. It is thereby enabled to use a larger thread to a given size of needle than any machine in the market, consequently making a more perfect stitch. It also uses a shorter needle than any other lock stitch machine.

Unequalled for the whole range of family work.

The Singer Manufacturing Company's

Improved Manufacturing Machine,

(LOCK STITCH.)

WITH OSCILLATING SHUTTLE.

This machine is the result of many years' careful study of the needs of manufacturers united with our long experience. A large amount of money and the greatest mechanical skill were employed in experiments and tests, which should enable us to offer a manufacturing machine that should supersede every other, and we confidently claim to have produced such a machine in our Improved Manufacturing.

By its peculiar construction, this machine draws the needle thread both down and up while THE NEEDLE IS OUT OF THE GOODS. It is thereby enabled to use a larger thread to a given size of needle than any machine in the market, consequently making a more perfect stitch. It likewise uses a shorter needle than any other lock-stitch machine.

Can be run by power at the highest rate of speed with a MAGNITUDE OF TENSION that cannot be attained by any other machine, meanwhile doing the very finest stitching

Adapted for the widest range of work on leather, cotton and woolen goods, corsets, gloves, etc. Wearing points are adjustable, so that lost motion can be readily taken up

Designed for foot or steam power. Is supplied with either wheel or drop feed.

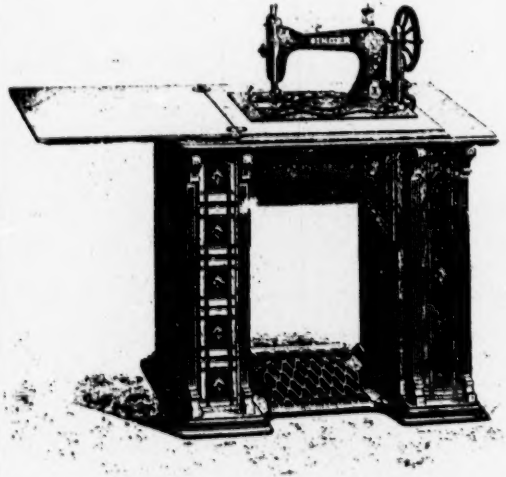
590

1997

THE CUT BELOW REPRESENTS OUR NEW

Drop Cabinet Case Machine

(OPEN)



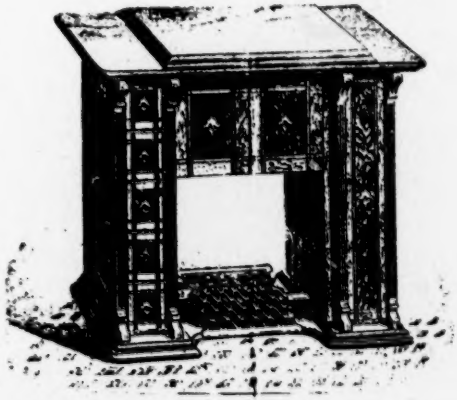
A NEW INVENTION.

The Handsomest and Most Convenient Cabinet Case Machine ever invented.

THE CUT BELOW REPRESENTS OUR NEW

Drop Cabinet Case Machine

(CLOSED)



This Cabinet is so ingeniously constructed that it can be opened and closed, even by a child, without trouble. The extension leaf, when open, makes a convenient table upon which to rest work; when closed, it makes a handsome piece of furniture, and can be used as an ornamental table. It is not liable to get out of order.

1998
691

OUR

IMPROVED FAMILY MACHINE,

WITH OSCILLATING SHUTTLE,

Differs in nearly all Points from any Machine manufactured by us heretofore, and we confidently claim for it:

STRENGTH AND DURABILITY UNEQUALLED.

INCOMPARABLE FOR EASE OF OPERATION.

NOT EQUALLED FOR SIMPLICITY OF CONSTRUCTION.

GREAT RAPIDITY, AND ALMOST NOISELESS.

EQUIPPED WITH EVERY VALUABLE IMPROVEMENT.

RANGE OF WORK FAR EXCEEDING ANY OTHER MACHINE

SINGER MACHINES

CAN BE KEPT IN REPAIR FOR LESS THAN ONE-HALF

THE EXPENSE OF ANY OTHER MACHINE.

BRANCH OFFICES in all cities and large towns.

SUB-AGENTS in every village throughout the World.

WE CHALLENGE

ANY SEWING MACHINE BEFORE THE PUBLIC TO EQUAL THE

IMPROVED

FAMILY SEWING MACHINE,

WITH OSCILLATING SHUTTLE,

FOR

RANGE OF WORK,

PERFECTION OF STITCH,

EASE OF OPERATION.

It Possesses the following Advantages over all other Machines:

1st. Uses the shortest needle of any Lock Stitch Machine.
2d. Carries a Finer Needle with a given sized thread.
3d. Uses a greater number of sizes of thread with one size needle.
4th. Will close a seam tighter with linen thread than any other machine will with silk.
5th. The Shuttle holds the most thread.
6th. Draws the needle thread both down and up while the needle is out of the goods, therefore there is less friction on the needle and thread, consequently a tighter and more elastic seam.
7th. It has a positive feed that will not choke in sewing any material.
8th. Sews faster and with less noise than any other shuttle machine.
9th. Will sew a greater number of sizes of thread without change of tension.
10th. Will not change tension when sewing with a short or long stitch at varying speed.

FOR FAMILY SEWING,

AS WELL AS FOR

Manufacturing Linen Bosoms, Cuffs, Collars, Fine Shoes, Corsets, Dress Making

AND CUSTOM TAILORING,

IT IS SUPERIOR TO ALL.

1989 592

advertised. That is printed on there. The location of the office is 22 Post street, and from that and their recollection, they know those circulars were not in use until after August 1, 1885, and they show the Improved Family machine on these trade-mark stands.

(The circular referred to was here introduced in evidence and marked Defendant's Exhibit No. 19, the following being a photographic copy thereof:)

(Here follow photographs marked pp. 589 to 592, incl.)

593 Mr. WHEATON:

Q. What cuts, if any, upon that circular, shows the trade-mark stand?

A. On the first page, on the second page, and on the third page.

Q. Is there anything in that circular that advertises the Improved Family machine in connection with a trade-mark stand?

A. The cut simply shows it, the Improved Family machine on the trade-mark stand.

Q. What means, if any, have you of knowing that that circular was not issued until the 1st of August, 1885, or later?

A. We would not use them when we were on Sutter street, previous to July. It says 22 Post street. First of July, 1885, we were at 116 Sutter street. I was with the company at that time. I had been with the company four years. My memory as to moving—I always had an object in remembering that, because we were in mourning for the death of President Grant before we left Sutter street, and when we moved to Post street we had to put up mourning again. The company has records to show exactly the time that it moved and opened the office at 22 Post street. I have no recollection.

Q. Do you know whether those circulars were issued in any quantities here or not on the Pacific coast?

A. Yes, sir; that is what we sent out with our machines—when that machine went out.

(The circular, Exhibit 19, was here read to the jury.)

Mr. WHEATON: I will pass this to you, gentlemen, and call
594 your attention to the fact that this is the Improved Family, and not the old New Family, and that the cuts show the Improved Family machine on the trade-mark stand.

Q. When was the next consignment of any Improved Family machines from New York to San Francisco after January 23, 1885?

A. New York bill March 17, 1885. Sixty Improved Family machines came in that consignment.

Q. What else, if anything, came in that consignment that were to be used with those Improved Family machines?

A. There was wood-work, tables, drawers, and covers.

Q. Were there any treadles or stands that came with them?

A. No, sir; sixteen Improved Family cloth machines; five-drawer drop-leaf table and cover complete, excepting stand, sides, treadles and cross-braces.

Q. In that last statement, did you read it from the invoice?

A. Yes, sir. It means that stands, sides, treadles and braces did not come.

Q. What is the next consignment of Improved Family machines that came from New York to this coast?

A. New York bill March 20th, 1885. Eighty Improved Family sewing machines were contained in that consignment. There were Improved Manufacturing machines, and New Family hand machines. It does not say "New Family" on the bill.

Q. Were there any treadles or stands that came for those Improved Family machines in that consignment?

595 A. Improved Family machines complete, except stands, sides, treadles and braces. The machines were complete without those parts. Those parts did not come.

Q. When was the next consignment of Improved Family machines from New York to San Francisco?

A. New York bill May 29, 1885. One hundred and seventy Improved Family machines were in that consignment. There were no stands, sides, treadles or braces for those Improved Family machines in that consignment.

Q. When was the next consignment to San Francisco of Improved Family machines?

A. December 31, 1885. Three hundred and sixty Improved Family machines were received in that consignment. Complete except, stands, sides, treadles and cross-braces.

Q. That you are reading from the book?

A. Yes, sir. "Complete except, stands, sides, treadles and cross-braces." There were no stands, sides, treadles or braces that come with those.

Q. When did you next receive a consignment of Improved Family machines from New York?

A. February 1, 1886. Six Improved Family machines came in that consignment. No stands or treadles came with them.

Q. When did you next receive a consignment of the Improved Family machines from New York?

A. March 15, 1886. That is the date of the bill. I am giving you the date of the New York bills. They were received April 14th.

596 Q. How many Improved Family machines were there in that consignment?

A. Eight hundred in this bill.

Q. Were there any stands or sides, treadles or braces, came with them?

A. Yes, sir. They were complete with castings; all castings complete.

Q. What kind of treadles did they have?

A. The bill does not state, but it states, "I. F." stands, Improved Family stands, complete.

Q. Do you know what that "Improved Family stands" meant?

A. I would not be positive, because this lot—there were six car-

loads, and the castings were loose in the cars. I can't tell what castings there were, but they were called Improved Family stands.

Q. What is the date of that?

A. The receiving date is April 14th, 1886.

Q. In those Improved Family stands meant the Diehl stand, please state whether or not April 14, 1886, was the first of the Diehl stands that were received here in San Francisco.

A. That is the first Improved Family stand, in this book.

Q. What is your judgment as to whether those were the Diehl stands, or not?

A. I have got no way to say whether they were or not. I could not say whether they were Diehl stands. They came loose, and I cannot compare packing, or anything.

597 Q. So far as you can fix the date, when were the first Diehl stands used here in San Francisco?

A. I cannot fix that date. I thought it was 1887, because we called it the 1887 stand, but I cannot say whether they were sent out in 1886, because we had them on hand. We had them in the house, and I cannot say how they were sent out.

Q. What, to the best of your knowledge and recollection, was the date at which the Diehl stands were first used here in San Francisco?

A. I have no recollection. That was the time I first saw them, in April, 1886.

Q. Can you tell whether they were used here in San Francisco prior to that date, April 14, 1886?

A. They were not used prior to that date here in San Francisco. I am unable to tell how soon after that they were used.

Q. Was the Singer Manufacturing Company ever located at Post street prior to July, 1885?

A. No, sir.

Q. As to the circular that has been put in evidence that you testified about, was that printed in San Francisco or New York?

A. It was printed in New York. We didn't print any circulars in San Francisco, not to my knowledge. All circulars were printed in the East, and are even now.

Q. You have given us the dates at which all of the Improved Family machines were sent to San Francisco up to April 14, 1886, have you?

A. Yes, sir. In none of those shipments were there any of the Diehl standards.

598 Q. Were there any consignments of goods from New York in which there were none of these Family Improved machines sent, in which consignments there were any of the Diehl stands?

A. I don't think there were. If there had been, I would have known it.

Cross-examination of JOHN A. MACMILLAN.

Mr. MILLER:

Q. You have produced some invoices here specifying Improved Family machines which you say were without any treadles, braces, or stands. Do you mean that those invoices show the sewing mechanism and the wood-work of the machine?

A. And parts of the stands that came with them.

Q. But each one of those entries says, without any braces, treadles or stands?

A. "Complete except treadles, braces, or stands."

Q. That is, you did not have any braces, treadles or stands with them?

A. That is what it means.

Q. What part of the machine came, then?

A. The machine proper, what is called the head, the wood-work complete, the band wheel, and the pitman.

Q. So that those designations in those invoices as Improved Family machines, referred in those invoices to the sewing mechanism, the wood-work and the band wheel and pitman?

A. Yes, sir; and did not refer to any stands, braces, or treadles at all.

Q. Did you use those machines without any treadles, braces or stands?

A. No, sir.

599 Q. You had to put a brace, treadle and stand on it before you sold the machine?

A. Yes, sir.

Q. Where did you get those braces, treadles and stands that you put on?

A. We had them in stock.

Q. Does that invoice show that any treadles, braces or stands came with them?

A. No, sir.

Q. What is there in the invoice of January 23d besides three hundred and sixty Improved Family machines?

A. There were fifty Improved Manufacturing machines, and ten cylinder machines, and four Improved Family cloth machines.

Q. What kind of machines were those?

A. Those were cabinets all around, frame wood-work all around for a stand. They had a treadle and band wheel, but they had no brace or stand sides. They had an ordinary common treadle that you could set on brackets, screwed onto the bottom of the wood-work below.

Q. What other thing was there in that invoice?

A. There are fifty band wheels, Improved Manufactured; fifty treadles; fifty braces; and there are three hundred and sixty band wheels, Improved Family.

Q. What are those fifty treadles and braces for? What machines did they go in?

A. They went in Improved Manufacture. They are a wider

brace, similar to that brace only larger (pointing). The wheel is larger, and the treadle is longer, to conform to the brace.

Q. In these other invoices, were there any treadles, braces or stands mentioned?

600 A. Not in connection with the Improved Family. There may have been other machines, there are so many different kinds of machines come in an invoice. I was simply asked to mention the Improved Family machines.

Q. Look at the next invoice there, March 17th; you say you have sixty Improved Family machines there. What else is there there?

A. There are twenty Family hand machines. That is a family machine, a little small machine, to carry around in a hand satchel that works with a wheel by hand. Thirty Improved Manufacturing machines, leather, complete except side stands. Five cylinder machines, drop-foot left-hand. Six No. 2 machines and stands. Six No. 2 short-shuttle Imperial machines and stands, with a specific foot mentioned—roller and presser foot it means, I presume. There are twenty No. 3 Imperial V. P. machines and stands. Then there are three thousand bottles three-ounce oil, and there are lots of sewing-machine parts—parts of wood-work, and quite a number of accessories.

Q. In this large invoice of March 15, 1886, containing eight hundred machines, how were those machines designated? I want to get the Improved Family.

A. "Three hundred Improved Family machines, drop leaf, table and cover."

Q. That is the whole entry, is it?

A. The whole entry about that item. It does not say anything about any stand or treadles or braces.

Q. Those you think had the Diehl brace in them, do you?

A. I think from the particulars of packing that they did—I have an idea that they had.

601 Q. There is nothing in the entry itself, though, to show that pattern of brace it had?

A. No, sir, but they were machines complete; that showed that they were complete machines.

Q. Were not the other entries of machines complete?

A. Complete excepting something.

Q. And because this one says "machines complete," you think they had the Diehl brace in them?

A. I don't know that they had the Diehl brace in them.

Q. You think they had some kind of brace?

A. Yes, sir; they were machines complete.

Q. Then the truth of the business is, you do not know whether this invoice of March 16, 1886, contained the Diehl brace or not?

A. No, sir; any more than in the particulars of packing it says, "Improved Family stands." It does not say anything about the style of braces or treadles.

Q. And from that entry you have drawn the conclusion, have you,

that in your judgment that was the first receipt of the Improved Family machines which had the Diehl treadle?

A. Yes, sir. But subsequently to that I can recognize the packing.

Q. Look subsequent to that at some of the invoices which you know to be the Diehl treadle, and see how they are designated.

A. It does not designate any special treadle, but from the weight of the castings and the style of packing, I recognize it.

602 Q. Pick out one that you recognize to be a Diehl machine?

A. March 19, 1886.

Q. What does that invoice show in regard to the machine?

A. Three hundred Improved Family cloth machines five hundred Improved Family machines; that made eight hundred in all.

Q. Are there any more in that invoice?

A. There are fifty Improved Family leather machines, plain, no stand; fifty Improved Manufacturing machines, no stands. Six carpet machines. Then there are thirty Improved Family machines, black walnut, drop cabinet cases. Also ten black walnut drop cabinet cases, for New Family. There were no heads with them. Also two twenty-six inch machines, no stands. One thousand New Family stands, complete except tables and band wheels. That was the New Family. That was the machine previous to the Improved Family, used on that same stand.

Q. When did you receive that invoice of goods?

A. April 12, 1886, it is marked here. It was later than the previous consignment in date, but received previous to it, it seems. That is in my handwriting there, April 12, 1886.

Q. How many Improved Family machines were there in that invoice in all?

A. Eight hundred. And then on April 14th I also received eight hundred from the invoice of March 15th. In both cases the machines were designated simply as "Improved Family machines, complete."

603 Q. And you have nothing else to go by to determine what kind of a treadle there was in it?

A. No, sir, except I recognize the packing, the way they started in to pack at that time. This lot I cannot recognize because they came loose in the case, castings loose, piled up; but here they are packed up.

Q. What is the next invoice after that one that you received, of Improved Family machines?

A. There is a bill of New York, March 26th, of Improved Manufacturing machines. Those are not Improved Family.

Q. Did they have the Diehl standard in them?

A. I could not say as to that. The Improved Manufacturing machine that we sell today has the Diehl stand in it.

Q. Do you have any entry in that invoice there of March 15, 1886, of goods received by you on April 14, 1886, showing treadles, braces, and stands?

A. I have four hundred stand sides, New Family, right, and five

hundred stand sides, New Family, left—the trade-mark stand. That was the only style machine that we were working off.

Q. Do you find any entry of treadles or braces?

A. Not by description. If it is given by number, I cannot place it.

Q. Suppose a lot of Improved Family machines complete, with the Diehl standard in them, are sent to the Singer Manufacturing Company at San Francisco from their head office in the East. How are they designated in the invoice?

604 A. They just simply say so many Improved Family machines, description of wood-work. They are numbered now, class number. The Improved Family machine is class 15 now.

Q. And before you begin to designate them by the class numbers, these were all designated simply as so many Improved Family machines, were they?

A. I think so.

Afternoon session.

APRIL 11, 1900.

Mr. WHEATON: I want to recall Mr. Macmillan, as one of my associates thinks I omitted a question.

The COURT: Mr. Macmillan, take the stand.

JOHN A. MACMILLAN, recalled for the defendant.

Mr. WHEATON:

Q. I want to ask you whether it would be possible to put the Diehl brace into these trade-mark stands, as a mechanical proposition?

A. No, sir.

Q. I understood you to say that prior to April, 1886, the Singer Company had several thousands of these trade-mark stands on hand here in San Francisco in stock. Is that correct?

A. Yes, sir.

CHARLES F. KRATZ, called for the defendant, was sworn and testified as follows.

My name is Charles F. Kratz; age, 47; residence, San Francisco; occupation, machinist. I have been in the employ of the Singer Company from the year 1872 up to date. In 1882 I was here in San Francisco in the employ of the Singer Company. I went to

605 Central America for them, selling sewing machines. I remained in Central America from September, 1882, to May, 1888.

Mr. WHEATON:

Q. Where did you receive your stock of sewing machines from that you sold in Central America?

A. I received my stock from the Singer Company in San Francisco. I sold a great many New Families, and a few Improved Families. I never received any that had the Diehl brace; what I

now understand as the Diehl brace. I received the trade-mark stand on all machines.

Q. The Diehl brace is represented by Exhibit "P."

Q. What are your means of knowledge when you say that if they had been selling those Diehl stands in San Francisco, that you would have received them in Central America?

A. I always asked them to send me the latest style of machines in my letters. So far as they had them, I suppose they sent them to me.

Q. Did you sell any of the Improved Family machines in Central America?

A. I sold a few dozen, say four dozen, from the year 1884 to the end of 1887. They were on this stand here, this trade-mark stand.

Q. When was the first that you ever saw, to your knowledge, one of those Diehl standards on a machine?

A. I saw them in the factory East, when I went there in 1888, at the Singer Company's factory in Elizabeth, New Jersey.

606 Cross-examination of CHARLES KRATZ.

Mr. MILLER:

Q. What do you mean by the "New Family" machine that you speak of?

A. The New Family is a machine that was manufactured in the year 1872, when I started in the Singer factory. It is a low-armed machine, and was used for family sewing. It had, up to 1878, a plain stand, without any trade-mark on it.

Q. When did they first commence selling the trade-mark stands?

A. I had in my hands the band wheel and pitman at the end of 1879, and I sold the machine in 1880 that has the trade-mark stand.

Q. You say you sold only about four dozen of the Improved Family machines?

A. Yes, sir.

Q. How many did you sell of the other stock?

A. About a hundred a year.

(The Diehl patent, Defendant's Exhibit No. 1, was here read to the jury.)

HENRY F. BLANCHET, JR., called for the defendant, was sworn and testified as follows:

My name is Henry F. Blanchet, Jr., age 36; residence 853 Hayes street, San Francisco; occupation, book-keeper for the central office of the Singer Manufacturing Company, San Francisco. I have been employed by the Singer Company for twenty years at their books, in various capacities.

Mr. WHEATON:

Q. Do you know at what time the company moved its store from Sutter street to 22 Post street, in San Francisco?

607 A. Yes, sir; we took possession of the premises at 22 Post street on August 1, 1885. We were in course of moving for probably ten days prior, and possibly one or two days after that date. We commenced moving in July, 1885, to No. 22 Post street.

Q. I show you a duplicate of Exhibit No. 19, one of the Singer Company's circulars, and ask you if you do not know where those were printed?

A. These were printed by the company in the East; probably in New York city. They were not printed here in San Francisco. I know they were not printed before the company moved to Post street. There are no cuts of the Diehl stand in this circular.

Q. What examination, if any, did you make of the invoice books of the Singer Company with Mr. Macmillan, who testified this forenoon?

A. I looked over the invoices for the various dates from January 1, 1885, until after March 14, 1886.

Q. Did you hear Mr. Macmillan testify this forenoon?

A. I did, most of it; yes.

Q. Do you know whether the statements that he made with reference to those invoice books were exactly true, of your own knowledge?

A. They are true, to the best of my knowledge, from my examination of the invoice book.

Q. Have you any means of knowing how many of the New Family sewing machines were sold in the counties of Tuolumne, Mariposa, Calaveras, and Stanislaus, from the beginning of the year 1884 up to the end of the year 1886?

A. Yes.

608 Q. Please state how many of the New Family sewing machines were sold in each of those counties in the year 1884.

A. In Calaveras county, twenty-one net sales, New Family machines. Tuolumne county, six net sales, the same year. Stanislaus county, sixty-two net sales. Mariposa county, twenty-six net sales. In all, one hundred and fifteen.

Q. In the year 1884, were there any of the Improved Family sewing machines sold in either one of those counties?

A. No, sir; not any.

Q. Take the year 1885. How many of the New Family sewing machines were sold in each one of those counties in that year?

A. Calaveras county, thirty-three net sales. Tuolumne, twenty net sales. Stanislaus, forty-four net sales. Mariposa, twenty net sales. In all, one hundred and seventeen.

Q. What do you mean by "net sales"?

A. I mean, deducting machines that have been repossessed from the gross sales. A machine that has been repossessed, does not come as a sale, because it reverts back to the company's possession.

Q. Were there any of the Improved Family machines sold in either one of those counties in 1885?

A. No, sir, not any.

Q. How many of the New Family sewing machines were sold in each of those counties in the year 1886?

A. In Calaveras county, eleven net sales. Tuolumne county, eleven. Stanislaus county, twenty. Mariposa county, five. In all, forty-seven sales.

609 Q. Were there any of the Improved Family machines sold in either one of those counties in the year 1886?

A. Yes, sir. Calaveras county, 14. Tuolumne county, seventeen. Stanislaus county, forty-eight. Mariposa county, one. In all, eighty.

Q. Can you tell us at what date in 1886 the first one of those Improved Family machines was sold?

A. I don't know the exact date, but it was probably three or four months after the beginning of the year; four or five months.

Q. Have you any means of knowing as to whether any of the Diehl stands were sold with those Improved Family machines in the year 1886 in those four counties?

A. No, sir. We kept no record of the stands. We kept records of the heads and wood-work, as far as sales went.

Q. What name was the Diehl stand commonly identified by among the workmen and employees in the Singer Manufacturing Company's place?

A. We used to call them the stand of 1887. That was the name given by our own employees to that stand. I had never heard it called the Diehl stand until this case came up.

Cross-examination of HENRY F. BLANCHET, JR.

Mr. MILLER:

Q. Please look in this book which you have produced here for 1884, under the head of "Sales in Mariposa county," and see if you do not find there any recorded sales of Improved Family machines for the year 1884. What does that entry on page 5 of this book mean, where a machine is designated as "I. F., plain"?

610 A. That means for the week ending January 19, 1884, there was sold to M. J. Warren, of Kelseyville, Lake county, California, one I. F. plain-table machine, No. 3,625,741, on which was received $2.50 cash, and a contract for $32.50. This sale was made by Salesman Eaton.

Q. What do the words "I. F., plain" mean?

A. An Improved Family machine with a plain table.

Q. Was he selling machines of that kind to other people also?

A. I cannot at this late date say. He was selling Singer sewing machines, or whatever machines we gave him to sell, or whatever machines he ordered.

Q. Amongst those he ordered the Improved Family machine?

A. Yes, sir; he did in this particular case, and he sold that machine at that time in 1884 in Lake county.

Q. The Singer Company were selling these Improved Family machines in other counties at that time?

A. Yes, sir.

Q. Have you gone over each one of these four counties to ascer-

tain whether any Improved Family machines were sold in those counties?

A. Yes, sir.

Q. Have you gone over the books for the other counties in the States?

A. I have gone over the books merely for these four counties, to ascertain the sales of New Family and Improved Family machines *in those four counties.*

Q. How is this machine designated on page 3 of the Singer catalogue of 1885, Plaintiff's Exhibit "L"? What is the name of that machine?

611 A. Improved Family, plain table.

Q. What is the name of this one appearing on page 7 of the other catalogue, Plaintiff's Exhibit "K"?

A. That is an Improved Family, three-drawer drop-leaf.

Q. Both of those would come under the designation of Improved Family machine, would they?

A. Yes, sir.

Q. Have you any recollection of these sales other than what you gather from these books here, from an examination of them?

A. No, sir.

Q. You have simply gone over the books and given what you have found on the books?

A. Yes, sir.

Q. What books were destroyed by the Singer Manufacturing Company?

A. I could not remember. It was two years ago probably.

Q. Did you destroy any invoice books?

A. Yes, sir.

Q. Any ledgers?

A. No, sir.

Q. Any sales books?

A. No, sir. Possibly some very very old sales book may have been destroyed.

Redirect examination of HENRY F. BLANCHET, JR.

Mr. WHEATON:

Q. Where were those catalogues, Exhibit "K" and Exhibit "L," printed, the catalogues that were just shown you?

A. All the catalogues and advertising matter that have been furnished us were all printed back East; furnished us by the company in New York.

612 Q. Do you know when that catalogue of 1885 first came to the Pacific coast?

A. No, sir. I could not say of my own knowledge positively.

Q. Do you know whether that kind of book was used East by the company before they sent them out here, or not?

A. Undoubtedly it was; yes, sir.

Q. Were any of the Improved Family machines which were sold

anywhere in California prior to 1886, sold with the Diehl treadle upon them, the Diehl stand.

A. No, sir, not any.

Recross-examination of HENRY F. BLANCHET, JR.

Mr. MILLER:

Q. Did you sell any of those machines?

A. I may have sold one of those occasionally.

Q. May not machines have been sold, for instance, down in Los Angeles, with the Diehl stand on it, and you not know it?

A. No, sir.

Q. Why not?

A. Because we hadn't any Diehl stands on the Pacific coast in 1885, and all the machines sold in Los Angeles were received from this San Francisco agency.

Q. How do you know?

A. Because I saw them, and I know it from the invoices.

Q. Where are the invoices?

A. You had them here this morning. I don't know where they are.

Q. Look at these invoices (producing book of invoices).

613 A. I know that we received no Diehl stands until 1886.

Q. Here is an invoice under date of January 23, 1885, in which there were received three hundred Improved Family drop-leaf and table and cover machines. What does that mean?

A. You want to read the rest of the entry.

Q. "Put in to fill car. All of above complete except stands."

A. That is it exactly. We received no stands with them. They were just merely heads with wood-work.

Q. Is that the reason you say that you did not receive the Diehl stands at that time?

A. For that reason, and also for the reason that I remember that we received none.

Q. Have you any recollection of it outside of those books?

A. Yes, sir. I know we did not receive any of the Diehl stands until early in 1886. They first came out here when there was a break in rates, and we ordered several car-loads of machines to take advantage of the break in rates. I could not tell you the exact date. I presume you could ascertain from the railway company. I know the break in rates was several months after we moved to 22 Post street, and we moved to 22 Post street on August 1, 1885.

Q. That would bring it down to about 1885 that you got the Diehl stand out here.

A. No, sir. I said several months after we moved to 22 Post street.

614 Q. You moved to Post street and got settled in 1885, did you not?

A. Yes, sir.

Q. How many months do you mean by several months?

A. Oh, six or eight months; something like that.

Q. That is what you mean by several months, is it?

A. Six or eight, or ten possibly.

Q. What I wanted to get at was as to your recollection of these dates. What is your recollection of the date when you got these Diehl standards out here?

A. Probably eight or ten or twelve months after we moved to 22 Post street. I can't give you the exact date, except by referring to that invoice book.

Q. How were they designated in the invoices?

A. I don't know without referring to the invoices.

Q. How are they designated now?

A. They are not designated by any particular means.

Q. How do you know one from the other when the invoice comes?

A. Because at a certain date the Diehl stand began coming, and the others were discontinued.

Q. Never mind about that. Just keep that back for a moment. I am not after that proposition now. I asked you how the Diehl stands are designated in your invoices now.

A. They are not put down at all except to say that they are stands.

Q. When the word "stands" occurs in the invoices, it means a Diehl stand, does it?

A. It does now.

615 Q. That is because you do not sell any other stand except the Diehl stand, is it not?

A. At the present time. There is no need of having any designation except the word "stand," at present; that is, for the Family machines.

Q. When they were first brought out, how were they designated in the invoices?

A. I don't know that they had any special designation.

Q. If you had an invoice reading "three hundred Improved Family machines" and nothing else was said, would that include the stand?

A. No, sir; it would not.

Q. If you had three hundred stands given with them at the same time, how would they appear in the invoice?

A. At what date?

Q. When they were first brought out here, say.

A. By reference to the invoice book, I could tell you.

Q. I am asking you for your recollection, as to how they are designated in the invoice book.

A. I don't remember the exact wording of the invoice. This thing happened, you know, about fourteen years ago.

Q. Yes; I know it happened a long time ago, but you claim to have a good memory.

A. I have a good memory on certain facts.

Q. What facts is it you have a recollection of.

A. I know very well that we moved to Post street on the 1st of August, 1885.

Q. But you do not remember particularly how those stands were designated in the invoice, do you?

A. No, sir, not particularly.

616 Q. If I show you an entry in that invoice book of so many Improved Family machines received on such a date by the Singer Manufacturing Company, would that include the stands, or would it just mean sewing part of the machine?

A. It depends upon how the invoice reads.

Q. Suppose I were to show you an invoice saying "one hundred and fifty I. F. machines," what would that mean?

A. One hundred and fifty Improved Family, heads only. It would not mean that the stands were connected with them. If the stands came along with them, it would probably say one hundred and fifty Improved Family, with a certain wood-work, and "stands complete." Or it might say, "one hundred and fifty I. F. machines," designating the wood-work, "complete."

Q. Sometimes they send the stands alone and sometimes they send them with the machine part itself, do they?

A. That might happen; yes, sir.

Q. So that if you have stands on hand, you get machines, and if you have machines on hand, you get stands?

A. Such a thing might occur.

Q. Do you sell the stands and machines separately?

A. Occasionally.

Q. What is the general custom?

A. To sell the head, wood-work, and stand complete. That is the way the agents sell the machine. They do not go around selling a stand by itself. Nor do they go around selling the top by itself.

617 Q. And so when they say and report to you that they have sold so many Improved Family machines, you take that to mean the machine complete, do you not?

A. They always report the stand and wood-work. That is to say, they report the wood-work, and we know the stand goes with it.

DONALD MACKENZIE, called for the defendant, was sworn and testified as follows:

I am forty-two years of age; I live at 328 Fifth avenue, in San Francisco. I have been in the employ of the Singer Manufacturing Company since the first week in January, 1881.

Mr. WHEATON:

Q. Whereabouts did you go to work for the Singer Manufacturing Company in 1881?

A. At Boston, Massachusetts, I started in to learn the business; started in to set up the machines when I went to work—set up the stands of machines, in the shipping department.

Q. What kind of stand was the Singer Company using at that time?

A. The stand that I see you term here the N. F. or trade-mark stand. They were using them altogether.

Q. How long did the company continue to use those trade-mark stands exclusively, from and after 1881, to your knowledge?

A. I would not say certainly, but I know it was certainly some time in 1885, late in 1885, or early in 1886.

Q. When did you come to San Francisco?

A. In 1890.

618 Q. What were you doing from 1881 up to 1891 with the Singer sewing machine?

A. After I got a sufficient knowledge of the business, I started out to sell their machines, and had charge of a branch at Lewiston, in Maine, in 1883, charge of three counties along there, part of three counties.

Q. Do you know what the custom of the Singer Manufacturing Company has been with reference to working off old stocks when something new came to their hands, before they would put the new device on the market?

A. It has always been a custom to get rid of the old stock first; keep it as much in the background as possible.

Q. With the trade-mark stand, was there ever any trouble as to the matter of alignment, either in the bearings of the treadle or the bearings of the pitman.

A. I never had any trouble.

Q. When did you first know the stand which has been called the Diehl stand in this trial?

A. I should say some time in 1885 or early in 1886. I only know definitely that I did know it before the last of May in 1886. I did know there was such a stand at that time.

Q. How do you fix the date?

A. Because I removed from Lewiston, Maine, to Lowell, Massachusetts, to take charge of their office there in the last of May, 1886, and I know I had seen the stand previous to that date.

Q. Could you tell how long previous to that date it was that you had seen it?

A. Not to a day nor a month, but I can tell when I did not have it.

619 Q. Very well, do so.

A. I did not have it early in 1885.

Q. Do you know what the Diehl stand was called among the employees and agents of the Singer Company in the East?

A. We hadn't any special name for it. As has been stated from the witness stand, we always sell the machine by the head. The head of the machine and the wood-work carries the sale.

Q. Among the employees and the agents, those that were selling and disposing of the machine and setting them up, etc., was there any term that would identify the Diehl stand from any others?

A. Not to my recollection.

Q. How extensive was the territory over which you were selling the Singer sewing machine in the East?

A. I was privileged to sell machines anywhere in the district covered by our Boston office, which is nearly all of the State of Massachusetts, New Hampshire, Vermont, and Maine. My own

individual territory, where I was supposed to sell all that were sold, was the territory around Lewiston, Maine, embracing Androscoggin county, all of it, part of Oxford and part of Cumberland counties. In Massachusetts I had the Lowell office territory assigned to me, which covered nineteen towns in and about Lowell, and some little part of New Hampshire adjoining there. I had also sold at Haverhill, Massachusetts. I have also sold machines for the company in Portland, Maine, and in Bath, and pretty generally over the territory there, at one time and another.

620 Cross-examination.

Mr. MILLER:

Q. When did you first commence to sell the trade-mark stand? Counsel certainly asked you if you had sold the trade-mark stand.

A. I answered him that I had set up the trade-mark stand.

Q. What do you mean by setting up the trade-mark stand?

A. Putting the parts together in the shop, the shipping department, as we call it.

Q. That is, it was while you were setting them up that you said you never experienced any difficulty in the matter?

A. Yes, sir.

Q. You did not mean to say, then, that no difficulties were experienced in the use of the machine by the users thereof?

A. I never had any difficulty by the people using them.

Q. When did you commence to sell those machines?

A. The very first time I went to work for them. I sold that style of machine as late, I think, as 1888.

Q. And that style of machine, you said you never found any difficulty of the bearings of, never had any trouble with the bearings. Is that true?

A. Not any more than you have with any machine.

Q. Is it not a fact that all machines have trouble with the bearings?

A. No, sir. If the machine is properly adjusted in the first place, and screws set up, you will have no trouble with the machine.

621 Q. Did the users have any trouble with them in getting out of alignment?

A. Not to my knowledge.

Q. They may have had trouble with them, of course, without your knowledge?

A. Of course they may.

Q. What machine did you sell which took the place of that machine?

A. You are talking now of stands, or machines?

Q. Stands.

A. The one that you are speaking of as the Diehl stand took the place of that.

Q. When did the Diehl stand take the place of the other one, so far as you know; that is, under your immediate supervision?

A. If I had been asked to state it without swearing to it, I should say in 1886, in Lewiston, Maine.

Q. You have been selling them, then, ever since that time, have you?

A. Yes, sir, and at the same time selling some of the others.

Q. You made large sales of the machines which carried the Diehl stand?

A. I have made many sales, yes, sir. They have given good satisfaction.

Q. The Singer Manufacturing Company has not changed from that style of machines, the way of mounting the treadle in the cross-brace, have they?

A. No, sir, I think not.

F. J. KIERCE, called for the defendant, was sworn and testified as follows:

622 I am an attorney-at-law, at rooms 1101–'2–'3 Claus Spreckles building, in San Francisco. I was admitted to practice on May 2, 1887, and have practiced here ever since. I know Mr. Cramer, the plaintiff in this case.

Q. Please state whether or not you ever heard him make any statements as to whether or not he knew whether the Singer Manufacturing Company was defending the former suit of Cramer *v.* Fry?

A. I answer that question yes. The circumstances under which that conversation was had might be of such a character that the answer might involve the relations which existed between Mr. Fry and myself, and unless he consents in open court, I would not care to testify, because it involves another question.

The COURT:

Q. You were his counsel at that time?

A. Yes, sir.

Q. And you do not know but that he may object to your divulging that conversation?

A. Yes, sir; because the conversation will cover other matters which embrace the relations between the plaintiff and defendant in this case and also in the other case. If he consents, I will testify. If he does not, I will not.

The COURT: Have you any objection, Mr. Fry, to this witness testifying fully as to the matters about which he is now questioned, referring to the time when he was your attorney?

Mr. WILLIS B. FRY: I have no objection.

The COURT: Very well. Proceed.

The WITNESS: It was during the time that the other case 623 was on trial, between April 2, 1895, and April 12, 1895, I cannot give the exact date. It was one of the days when the case was on trial, in this court, and the case was on trial on Tuesday, Wednesday, Thursday, and Friday of the first week, and on Tuesday and Wednesday, part of the second week. It was during one of those days.

Mr. WHEATON:

Q. Where did that conversation take place?

A. In Mr. Boone's office, which, if I recollect rightly, was in the Nucleus building, where the "Examiner" building now stands.

Q. Who were present?

A. Mr. Boone, the plaintiff, Mr. Cramer, and myself.

Q. Proceed.

A. Mr. Boone said that in the case of Cramer *v.* Fry, he did not expect to make anything out of the defendant Fry, for the reason that he was the Singer Company's agent, but that he expected to recover a judgment in that action, that is, in the case of Cramer *v.* Fry, before the jury, and that he would make that judgment the basis of proceedings for the purpose of getting an injunction against the Singer Company. At the same time and place he said that we ought to be well paid by the Singer Company for the services which we were rendering in that *that* action in defending it. Mr. Cramer was present at that conversation, it was said in his presence, and at the same time he suggested that we ought to be well paid for the services rendered in that case by the Singer Company. He did not participate in the other portion of the conversation to which I have just testified, except in so far as he heard it.

624 Mr. MILLER: I move to strike out that answer upon the ground that it is wholly incompetent, irrelevant, and immaterial.

The COURT: The motion to strike out is granted.

Mr. WHEATON: We will reserve an exception.

Exception Sixth.

To which ruling of the court the defendant, by its counsel, duly excepted, and hereby tenders this its bill of exceptions for the court to sign and seal, and the court does hereby sign and seal the same.

Mr. OFFIELD: Does your honor strike out the part of the conversation alleged to have occurred that related to the Singer Company paying for the defense of the suit?

The COURT: Yes. That was the conversation of Mr. Boone. Mr. Boone said he hoped the Singer Company would pay them well.

The WITNESS: Mr. Cramer also stated the same thing afterwards. Mr. Boone said it, and immediately thereafter Mr. Cramer said it. But Mr. Cramer did not say anything about his procuring a judgment against Mr. Fry as a basis of injunction proceedings against the Singer Company.

The COURT:

Q. Mr. Kierce, with whom were you associated at the time you had this conversation?

A. I was a member of the firm of Wheaton, Kalloch & Kierce.

Q. Did they have anything to do with the dismissal of the case as against the Singer Sewing Machine Company?

625 A. They were the attorneys for the Singer Sewing Machine Company, and I collected the judgment for costs of Mr. Mhoon.

Q. When was the case dismissed as against the Singer Manufacturing Company?

A. Late in the year 1893 or early in the year 1894.

Q. Then it had been dismissed at the time of this conversation?

A. Yes, sir.

Q. Did you have anything to do personally with the making of that motion?

A. I was in court and participated in the proceedings. My recollection is that Mr. Kalloch and myself were in court on the argument.

Q. Was Mr. Cramer here at the time?

A. I don't think so.

Q. What I want to know is as to whether there is any evidence that would indicate that Mr. Cramer knew that you had appeared for the Singer Manufacturing Company and secured a dismissal of the case as against that company at this time, were there any other counsel than yourself appeared for Mr. Fry?

A. Yes; Mr. Offield.

Q. Did Mr. Offield appear on this motion to dismiss?

A. He was not out here from the East at that time.

Q. When the case was on trial was Mr. Offield here?

A. Mr. Offield was here all except the last day or so, when the jury brought in a verdict.

Q. And you appeared for Mr. Fry after the case was dismissed as against the Singer Manufacturing Company?

A. We continued right on. I think the papers were pre-
626 pared in that matter by me individually, as attorney for the defendant; I think I prepared the demurrers and motions on which the motion to strike out was made.

Q. Yes, you appear here. It is signed Wheaton, Kalloch & Kierce, F. J. Kierce.

A. The signature is in my handwriting.

The COURT: It may be that the circumstances, taken together, are such that the matter ought to be submitted to the jury. The motion to strike out is denied, then, so far as the witness has testified to what Mr. Cramer said with respect to counsel being well paid by the Singer Manufacturing Company for their services. All the remainder of it is stricken out.

Cross-examination of F. J. KIERCE.

Mr. MILLER:

Q. Mr. Kierce, can you fix the date when this conversation occurred?

A. I could not fix the exact date, no. But I know it was during the trial. You see, our office had considerable business back and forth with Mr. Boone's office, and back and forth with your own office. It was during one of those times that I was over there that

I met Mr. Cramer with Mr. Boone, that this conversation that I detailed originally took place.

Q. You do not remember the occasion of your going there?

A. I do not remember the occasion of my going there, without going back to the records, which I could probably find. But I did not undertake to hunt anything up from original sources.

Q. Was it while the case was on trial?

627 A. It was while the case was on trial. I also met Mr. Cramer after the case had suspended, I think on the 17th.

Q. Between what dates was it that this case was on trial?

A. Between the 2d and 12th of April, 1895. It was before the case was finished that this particular conversation took place.

Q. What is it that impressed it upon your mind that the conversation took place before the case was finished?

A. Because we had another conversation, somewhat akin to this, after the judgment was rendered in this particular case.

Q. You had two conversations?

A. Yes, sir; and I think the exact date when the last conversation was had was on the 17th of April, 1895, or possibly on the Saturday after the trial; I am not absolutely certain which. I know, at any rate, that I went there, either on Saturday after the trial or on the day on which I served the cost bill, which was within five days after the judgment was rendered, and I had a conversation similar to the one I have referred to.

Q. I am not referring to that one, because you did not mention that in your direct examination. I am simply trying to fix, as near as I can, the time of the conversation.

A. I cannot fix it any closer than that.

Q. You can fix the place?

A. I think the office was then in the Nucleus building.

628 Q. That is when Mr. Boone was in partnership with Mr. Nougues?

A. Yes, sir. He was one of the original attorneys in the case.

Q. This was in the office of Boone & Nougues?

A. Yes, sir.

Q. Do you remember in which room it was?

A. It was in Mr. Boone's own room.

Q. And there was no one present but you and Mr. Cramer and Mr. Boone?

A. Mr. Cramer, Mr. Boone, and myself; yes, sir, that is all.

Q. Do you remember what time it was?

A. I think it was some time — afternoon. I could not swear positively as to that. But I know it was during the course of the trial and before judgment was rendered.

Q. You think it likely that it was on Saturday?

A. I could not say. I have no independent recollection of the exact time. I have a general recollection that it was during the trial of the case of Cramer *v.* Fry.

Redirect examination of F. J. KIERCE.

Mr. WHEATON:

Q. I would like to ask you, Mr. Kierce, what you know of your own personal knowledge with reference to the Singer Manufacturing Company being the party that did defend that suit of Cramer *v.* Fry?

A. The Singer Company paid all the fees in all the litigation of this case of Cramer *v.* Fry. All the charges for attorneys' fees, costs, and everything, connected with this case, were made
629 against the Singer Manufacturing Company and the Singer Manufacturing Company only. I know that of my own knowledge, because I presented the bills, I made the collections, and the blotter of the office of Wheaton, Kalloch & Kierce will show that the charges are made by me in the books.

Q. That applies to all the attorneys' fees in California, does it not?

A. All the fees that were paid out here.

Q. Do you know at whose expense the depositions were taken in the East?

A. They were paid for there. The only information that I have in connection with that is this: After the jury rendered its verdict in the case of Cramer *v.* Fry, I telegraphed to the East to get the items of cost from the commissioners who took the testimony. Telegrams were sent back in reply, and the costs were inserted in the cost bill, now on file. They never were paid here, nor any charges entered in our books for them here, except in so far as the charges were entered for affidavits which were made in this city and county.

Q. Did Mr. Fry ever pay a dollar of the expenses of that litigation, the case of Cramer *v.* Fry?

A. Not one cent.

Recross-examination of F. J. KIERCE.

Mr. MILLER:

Q. Where did you present your bills, Mr. Kierce, when you went to get them paid?

A. I presented the bills at the Singer Manufacturing Company's office here in San Francisco.

Q. Who had charge of that office?

630 A. Mr. Fry. Sometimes to him, and to Mr. Atherstone at other times. Mr. Fry was the general agent of the Singer Manufacturing Company in San Francisco.

Q. When you wanted anything connected with the case you went to him?

A. Not necessarily.

Q. Never mind about not necessarily. I asked you what you did.

A. I did not.

Q. To whom else did you go?

A. I went to Mr. Atherstone, who is the city agent of the Singer Manufacturing Company, to collect the bills there.

Q. You presented the bills to him?

A. Yes, sir; all the small bills, and when Mr. Fry was not around, they were paid by Mr. Atherstone.

Q. When Mr. Fry was around, they were paid by Mr. Fry?

A. They would be presented, and in three or four weeks we would get our money for fees.

Q. You said that when Mr. Fry was not around, the small bills were presented to Mr. Atherstone?

A. Yes, sir; I think he was city agent.

Q. If Mr. Fry was present when you would go there, you would always present your bills to him?

A. Yes, sir; I think so.

Q. You did not present them to anybody else except to Mr. Fry when he was there, did you?

A. If it was small bills, we had a right to have them paid. If it was a matter like our fees, that would not be paid, but small bills we presented to nobody else, except to Mr. Atherstone, and he would see them paid.

681 The COURT:

Q. And the bills for your fees were not small bills?

A. That depends on what you call a fair figure for services rendered. I mean by small bills, bills of this kind: We had the practice in our office——

The COURT (interrupting): That is sufficient, Mr. Kierce.

Further redirect examination of F. J. KIERCE.

Mr. WHEATON:

Q. Were our bills by checks?

A. I think they are generally. The Singer Manufacturing Company's checks, drawn on the Donohoe-Kelly bank.

The COURT:

Q. By Mr. Fry?

A. I think he signed them—or they were signed by Mr. Atherstone in some instances.

Mr. WHEATON:

Q. Where did the checks come from that we got our money on?

A. I am not sure whether they came from the New York office, or whether they came from here. At any rate, they came through the medium of the San Francisco office, whether checks drawn on the Donohoe-Kelly bank or by eastern draft, I do not now recall.

Mr. MILLER:

Q. Did your firm ever send one of those bills directly to the head office of the Singer Manufacturing Company in the East, or were they all first sent to Mr. Fry's office here in San Francisco.

A. I think they were always sent direct to Mr. Fry's office. I could not tell you absolutely, but I think so.

632 THURSDAY, *April* 12, 1900.

WILLIS B. FRY, called for the defendant, was sworn, and testified as follows:

Mr. WHEATON:

Q. Mr. Fry, when, if ever, were you in the employ of the Singer Manufacturing Company?

A. I was with them from 1877 until the latter part of 1899. I was with them in Portland, Oregon, in 1877. I took charge of the San Francisco territory in February, 1887.

Q. Are you the same Willis B. Fry who was the defendant in the suit of Cramer *v.* Fry, that was tried in this court, before Judge McKenna?

A. Yes, sir.

Q. Do you recollect in that case the deposition of Mr. Brevoort being introduced in evidence?

A. Yes, sir.

Q. Can you identify the exhibit which was referred to in Mr. Brevoort's deposition, put in as "Defendant's Exhibit Illustrated Stand, Brace, Cross-bar, and Treadle, No. 2"?

A. Yes, sir.

(The witness here identifies the exhibit.)

The COURT: Let it be marked.

Mr. WHEATON: With the same mark that was put on it then, "Defendant's Exhibit Illustrated Stand, Brace, Cross-bar and Treadle, No. 2."

The CLERK: It is in evidence as "Defendant's Exhibit No. 10."

Mr. WHEATON:

Q. Mr. Fry, do you know Herman Cramer, the plaintiff in this case?

A. Yes, sir.

Q. Did you have any conversation with him or he with
633 you with reference to your testifying in this case, recently?

A. I did; yes, sir.

Q. Where did that conversation take place?

A. It took place in my home in Oakland, on February 22d, of this year.

Q. Who was present at that conversation?

A. Mr. Cramer and myself. Mr. Cramer called at my house to see me in reference to it. I was out in the yard at the time, and went in and had the conversation with him. There was no one else present in the room at the time.

Q. Please state what that conversation was.

A. Mr. Cramer stated that he called to see me in reference to testifying for him in this case. One of the points upon which he wished me to testify was as to the number of sewing machines that

had been sold by the Singer Manufacturing Company. I stated to him that I could not give him that information. Another question that he asked was, whether I could not tell from the books how many machines were sold, and I stated that I had no access to the books. Mr. Cramer then in that conversation stated that the Singer Company had infringed his patent, and that the courts, the United States Supreme Court, had so decided. I stated that I did not think the Singer Company had infringed his patent, and had not thought so at any time, and that I was not aware that the United States Supreme Court had decided as he stated. I then said to him that I thought it was rather strange that he should come to me and ask me to testify for him after having put me to all the trouble
634 he could by having sued me individually. He stated that, in suing me individually, he was obliged to do so to connect me with the company, as at that time there was some law by which he could not reach the company except by including me in the suit.

Q. What, if anything, did Mr. Cramer say with reference to getting damages from you?

A. I don't think he mentioned the word "damages" specially to me, but referred to the fact that he must include me in order to reach the company, but that since then the law had been changed, so that he could reach the company without including me.

Q. State all that was said.

A. There was considerable said along that line. I don't know that I can repeat word for word what was said, but he stated that the company had infringed, that he believed so, right along. There was some talk about that, and I insisted that I did not believe the company had infringed his patent at all.

Q. You do not remember whether he said anything about the company paying the damages in the case that he had against you?

A. Only in the way that he was reaching the company through me, and it was not intended to reach me personally; that he was intending to reach the company through me.

Mr. WHEATON:

Q. Did he make any statement as to whether he supposed that you were going to be put to any cost or expense by his bringing that former suit against you personally?

635 A. I cannot say that he said he expected the company would pay the expense of it, but he did say that he had to reach the company through me.

Q. Mr. Fry, as a matter of fact, who did make the defense in that case?

A. The Singer Manufacturing Company paid all the expense of that litigation. You are referring now to the Cramer-Fry case?

Q. Yes.

A. They paid it; yes, sir.

Q. Did you pay any of the expenses of that litigation yourself?

A. No, sir.

Q. What attorneys were employed in defending the suit here?

A. Messrs. Wheaton, Kalloch & Kierce. The suit was originally brought against the Singer Manufacturing Company and myself.

Q. What attorneys were employed by the Singer Manufacturing Company to defend the suit as to themselves?

A. Messrs. Wheaton, Kalloch & Kierce here, and Mr. C. K. Offield in the East.

Q. Was there any change made in the attorneys when the suit was dismissed as against the Singer Manufacturing Company?

A. No, sir. The same attorneys were kept right along through the case.

Q. Who employed Mr. C. K. Offield in the East?

636 A. He was employed by the Singer Manufacturing Company. I wrote them when the case was dismissed as against themselves, or at the time, that we should rely on their furnishing information both as to the facts and the law regarding it, and Mr. Offield was sent here by them and also took depositions in the East which were used in the case, and those were furnished by the company in the case against myself.

Q. Did you individually have anything whatever to do with the taking of those depositions in the East?

A. No, sir; I do not know who attended to taking those depositions in the East on the part of Mr. Cramer.

Q. When you came to the head of affairs here in San Francisco for the Singer Manufacturing Company in 1887, what kind of stands was the company then selling?

A. I am not positive of that. My recollection is that they were selling at that time some of both, the trade-mark stand and the stand that has been exhibited here as Exhibit "P."

Q. Was there any name given by the employees at that time by which they identified the Diehl stand?

A. It was called among the men in the shop the 1887 stand.

Cross-examination of WILLIS B. FRY.

Mr. MILLER:

Q. This original suit that you are speaking about was brought, as I understand, by Mr. Cramer in this court against the Singer Manufacturing Company and yourself jointly?

A. Yes, sir.

Q. And a large amount of damages was claimed by him in that suit?

A. Yes, sir.

Q. Were the papers in that suit served on you?

637 A. They were, in San Francisco.

Q. Were they served on any one else except you?

A. I don't know. I never heard of their being served on anybody except me. After that, attorneys were employed.

Q. What attorneys did you speak to in regard to the case at San Francisco?

A. Messrs. Wheaton, Kalloch & Kierce. I had known those gentlemen before. They had attended to some business for the Singer

Company in other suits, and in some matters, I think, that were not suits.

Q. The summons in that case required you to appear in this court within ten days, I think, did it not?

A. I presume so.

Q. And as soon as you got those papers, you took those papers over to Wheaton, Kalloch & Kierce, and turned them over to them to defend you, did you?

A. I possibly took them directly to them, or did within a few days.

Q. You notified your head office in the East that the Singer Company had been sued, did you?

A. Yes, sir.

Q. And you say they employed Mr. C. K. Offield there in the East, did they, to look after the suit for them?

A. I made that statement when the question was asked me, but I may have confused it as to the time when the suit was commenced against myself. Mr. Offield was connected with the case when the case was brought against the Singer Manufacturing Company or against myself, and took the evidence in the East.

638 Q. Mr. Offield was connected with the case from the beginning, was he not?

A. I cannot say that. I noticed that I had apparently misunderstood that question. As to whether Mr. Offield was employed in the case before it was dismissed against the company, my impression is that he was, but I cannot say positively as to that.

Q. After that suit was brought, the Singer Manufacturing Company, by its attorneys, came into court and got it dismissed as to the Singer Manufacturing Company, did it not?

A. There was some action in court, I think on a demurrer, and it was dismissed as against the company and denied as against myself.

Q. Then the case was left as Cramer *v.* Fry, without any Singer Manufacturing Company at all, was it not?

A. I believe on the record it was known as against myself.

Q. That was the title of the case, Cramer *v.* Fry?

A. Yes, sir.

Q. The parties went on with the trial of the case, then, in its then condition, with the Singer Manufacturing Company out of it, and you the only defendant in it, did they not?

A. That was the name of the case, and it was continued in that way.

Q. And in that case Cramer demanded damages against you personally?

A. Yes, sir.

Q. When the bills for the expenses in that case came in, were they turned into your office here by Wheaton, Kalloch & Kierce?

A. I think they were.

639 Q. Sometimes they were paid at that office, and sometimes they were sent East to be paid?

A. During more or less litigation that has been attended to by

that firm on this coast, the bills have been paid in different ways. The bills, I think, have always been presented at our office and sent to the company, and in some instances money has been paid directly from our office to the firm, and in some instances the Singer Manufacturing Company in New York have remitted direct to them. I think in one or two instances they have sent their check to me and I have handed it to Wheaton, Kalloch & Kierce.

Q. In those cases, did you give the company's eastern check to Messrs. Wheaton, Kalloch & Kierce, or did you deposit it in your bank and hand them your check?

A. If they sent their check from New York, I would hand it over to them, if it was made out to them.

Q. Was it ever made out otherwise than directly to them—that is, to you at the office here?

A. No, sir.

Q. You did give checks to Wheaton, Kalloch & Kierce for expenses, on your bank here in San Francisco, did you?

A. Yes, sir. We did give some checks covering the small items of the reporter's bills, or bills for briefs, or small bills of that kind that came in and that were O K'ed by Messrs. Wheaton, Kalloch & Kierce, which were sent to our office. They were paid from our office, and then the bills were sent to the company as part of our remittance.

640 Redirect examination of WILLIS B. FRY.

Mr. WHEATON:

Q. When you say "paid at our office," what office was that?

A. The office of the Singer Manufacturing Company. It was not an office in which I had any interest as proprietor. And when the money that was paid at the office was paid out, it was the money of the Singer Manufacturing Company.

Q. Was any of it your money?

A. No, sir.

Q. When you paid Wheaton, Kalloch & Kierce any money from the office here, was that paid by check?

A. Large amounts would be paid by check, I should judge, and small amounts—there may have been some small bills that were presented that were paid in coin.

Q. When those amounts were paid by checks, whose checks were they?

A. Checks of the Singer Manufacturing Company.

Q. Did you ever give us any personal checks for such expenses, or anything else, in connection with that litigation?

A. No, sir.

Recross-examination of WILLIS B. FRY.

Mr. MILLER:

Q. Some of the bills were paid in cash at the office?

A. Small bills. If a small bill was presented, a printer's bill, or something like that, it may have been paid in cash.

Q. How did you draw checks for the company, in what form?

641 A. On the regular form of blank check that we had. The printed signature was there, "Singer Manufacturing Company," and I signed underneath, "Willis B. Fry." The bank account is carried in the name of the Singer Manufacturing Company, and the check is drawn with the printed signature of the Singer Manufacturing Company, and then "by Willis B. Fry, agent," and the bank on which those checks were drawn was in San Francisco.

Mr. KALLOCH: If your honor please, we now offer in evidence from the reporter's transcript of the testimony and proceedings in the case of Cramer *v.* Fry, No. 11,808, commencing on page 9 thereof, a portion of the statement of Mr. Boone, attorney for the plaintiff in that action to the jury. This is a portion of the opening statement, and it reads as follows:

"We will show you, gentlemen of the jury, that after Mr. Cramer got his patent, he wrote to the Singer Sewing Machine Company, in New York, sent them a copy of his patent, called their attention to it, told them its benefits and advantages, and that they wrote to him and told him they did not want to have anything to do with it, that they did not want it. But we will show you that they immediately turned around and made the same thing, appropriated the benefit of the invention, used the invention as it is patented, but attempted to evade, or they will claim that they evaded, the use of the patent by using some other kind of a bearing than the knife-edged bearing.

"We have two claims in the patent. The first one is prop-
642 erly on mounting this treadle shaft in the vertical brace, and the bearing in this vertical brace that forms one integral piece, independent of any kind of journal bearing that might be used. And we claim that we might have used any journal bearing, and that Mr. Cramer might have substituted some other for it, and he would have got the same result.

"If we show that, gentlemen of the jury, we shall ask you to give us a verdict. So far as the question of damages is concerned, we will say to you now, before we enter into this case, that we are not going to ask any damages particularly from Mr. Fry. Mr. Fry is simply an agent of the sewing machine company, and we shall waive damages, although we have asked for twenty thousand dollars damages in our complaint."

Mr. KALLOCH: We also offer, from the same transcript, page 29 thereof, a letter date- Sonora, California, February 8, 1883, addressed to the Singer Manufacturing Company, by Mr. Cramer. That letter was marked in this case as Plaintiff's Exhibit "H." It is as follows:

"SONORA, CAL., *February* 8, 1883.

"The Singer Manufacturing Company.

"DEAR SIRS: Having invented one of the most improved sewing-machine treadles, I desire to call your attention to its merits, to make your machine the most complete of any sewing machine in

the market. I think you should embody my improvement in your machine. My patent treadle consists of a brace and treadle working in combination with each other, is frictionless as can be, noiseless, self-adjusting, always in line, most cheap, never needs
643 readjusting, does away with cones and set-screws, and makes the machine run a great deal lighter. I desire to sell my patent right, reserving the right to put them on all machines I sell, or to have you put them on your machines and give me a royalty.

"Yours truly, HERMAN CRAMER,
"*Sonora, Tuolumne Co., Cal.*"

The record then proceeds: "Marked Plaintiff's Exhibit 'C.' This is the reply: 'Office of the Singer Manufacturing Company, 34 Union square, New York, February 20, 1883. Mr. Herman Cramer, Dear sir: (Reads letter) (marked Plaintiff's Exhibit 'D')."

Mr. MILLER: We object to that offer on the same ground.

The COURT: What is the relevancy of that? That is in evidence already in this case.

Mr. KALLOCH: The purpose is to show that the correspondence between Mr. Cramer and the Singer Manufacturing Company, which is pertinent in this case, was introduced with equal claim of pertinency in the case of Cramer *v.* Fry, and could have had no other bearing in that case than to fasten the infringement upon the Singer Company instead of Mr. Fry. It has no reference to the issue between Mr. Cramer and Mr. Fry.

The COURT: Would it be relevant to the issues that arose on the complaint and answer between the plaintiff, and Fry as agent?

Mr. KALLOCH: No, your honor, because at the time, the recovery for damages for infringement was limited to two years prior
644 to the commencement of the action, and that was dated many years before that. It would have no reference to the issues between Cramer and Fry, certainly if to the issues between any of the parties. It was after damages had been waived, also, in the opening address by Mr. Boone.

The COURT: I would like to hold that matter in reserve. I have very serious doubts about the competency or relevancy of it. The whole proposition as far as I can see at this moment, is presented by Mr. Boone's statement.

Mr. KALLOCH: Very well, your honor. We will pass that and I will make another offer from the record, from page 115. This is a question by counsel for the plaintiff.

"Q. What is this pamphlet I hand you?

"A. That is a Singer Manufacturing Company's directions for one of their styles of machines.

"Q. Do you sell that style of machine?

"A. We do sell very few of these.

"Q. You have sold some?

"A. There have been some sold; quite a number sold.

"Q. I refer to the machine represented on page 24 of that catalogue. State whether or not you have sold any machines of that kind, constructed in that way.

"A. Our office has handled and sold machines with that form of brace and treadle in.

"Mr. BOONE: We offer this catalogue, that page particularly, in evidence.

"Q. I now hand you a copy of a patent issued to P. Diehl on the 14th day of October, 1884——

645 "The COURT: Is there any objection to that page?

"Mr. NOUGUES: Page 24, figure 26?

"Mr. WHEATON: Yes, sir.

"The COURT: What is the objection?

"Mr. OFFIELD: It is only a part of a machine, and it does not show when it was done.

"Mr. BOONE: I propose to follow it up.

"Mr. WHEATON: They are offering the patent, which is much more correct.

"The COURT: Do you withdraw this page?

"Mr. NOUGUES: No, sir.

"The COURT: The objection is overruled.

"Mr. KIERCE: We except.

"Mr. BOONE: I will read this.

"The COURT: I was only admitting the diagram.

"Mr. BOONE: We offer the whole paper.

"The COURT: What is the objection of the reading matter?

"Mr. NOUGUES: It is descriptive of the machine that they are selling, and which it is claimed is an infringement of this machine, and it sets forth the advantages that the company is claiming for that particular form of treadle."

Mr. MILLER: We object to that upon the same grounds, if your honor please.

The COURT: I will sustain the objection to that. You see, Mr. Kalloch, that is descriptive or is relative to the mechanism and as to whether or not it is an infringement.

646 Mr. KALLOCH: There is only one other point, and that I do not think will be denied, and that is that the machine alleged to be the infringing machine in that case is the same one that is alleged to be the infringing machine here. The infringing device in that case certainly was the Diehl stand as we have it in this case.

The COURT: Is not that the infringing device in this case?

Mr. MILLER: Yes, your honor, but I do not see how that cuts any figure in the present discussion.

The COURT: I will sustain the objection.

Exception Seventh.

To which ruling of the court the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Mr. KALLOCH: What is your honor's ruling as to the letters which were read?

The COURT: I will sustain the objection to them.

Exception Eighth.

To which ruling of the court the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

(The judgment-roll in the case of Cramer *vs.* Fry, No. 11,808, was here introduced in evidence by defendant's counsel and read to the jury, the following being a copy thereof:)

647 "In the United States Circuit Court in and for the Northern District of California, Ninth Circuit, of the February Term of said Court of the Year Eighteen Hundred and Ninety-three.

HERMAN CRAMER, Plaintiff,
vs.
THE SINGER MANUFACTURING COMPANY (a Corporation) and Willis B. Fry, Defendants.

Declaration.

The said Herman Cramer, as plaintiff, complains of The Singer Manufacturing Company and Willis B. Fry, as defendants, and for cause of action alleges:

I.

That the defendant, The Singer Manufacturing Company, is and at all times herein mentioned was a corporation organized and existing under the laws of the State of New Jersey, and is and at all times herein mentioned — engaged in the business of manufacturing sewing machines and selling the same throughout the United States. That as a part of its said business, it maintains and conducts and at all times herein mentioned has maintained and
648 conducted a branch establishment for selling and trading in sewing machines at the city and county of San Francisco, State of California, and in the northern district thereof, and in connection with its said business it has, and has had at all said times, a managing agent in said State and district of California, as plaintiff is informed and so believes the truth to be.

II.

That the defendant, Willis B. Fry, is the managing agent of said defendant, The Singer Manufacturing Company, in said State and district of California, and is a citizen and resident of said State of California, and the northern district thereof.

III.

That heretofore, and prior to the 25th day of May, A. D. 1882, the plaintiff above named was the original, first and sole inventor of certain new and useful improvements in sewing machines, en-

titled 'improvements in treadle for sewing machines,' which were and are fully shown and described in the letters patent hereinafter referred to. That the same was a new and useful invention, and was not known or used by others in this country, nor patented nor described in any printed publication in this or any foreign country prior to the application of said plaintiff for a patent therefor, nor had it been in public use or on sale for two years, nor abandoned, nor was it proved to have been abandoned.

IV.

That the said plaintiff, being as aforesaid the original and
649 first inventor thereof, did, on the said 25th day of May, 1882, file his application in the United States Patent Office for a patent therefor, and thereafter to wit, on the 30th day of January, A. D. 1883, letters patent for said invention were issued by the Patent Office of the United States, and delivered to the said plaintiff, granting unto him, the said plaintiff, his heirs and assigns, for the term of seventeen (17) years from said last-named day, the full and exclusive right and liberty to make, use and vend the said invention throughout the United States and the territories thereof.

That the said letters patent were issued in due form of law under the seal of the Patent Office of the United States, and were signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents of the United States, and were numbered 271,426, and bore date the 30th day of January, A. D. 1883, and were on said last-named day issued and delivered to the said plaintiff, which said letters patent, or a duly authenticated copy thereof, is ready in court to be produced.

That prior to the issuance of said letters patent all proceedings were duly had and taken that were required by law to be had or taken prior to the issuance of letters patent for new and useful inventions.

That by virtue of the premises the plaintiff is now, and during all the times hereinafter mentioned was the sole and exclusive owner of the invention set forth and claimed in and by said letters patent, and of all the rights and privileges granted and secured thereby.

Yet, notwithstanding the premises, the defendant herein,
650 having full knowledge thereof, and in violation of the exclusive rights and privileges secured to plaintiff by said letters patent, and utterly disregarding the same, and contriving to injure and damage plaintiff and his said rights since the date of plaintiff's said letters patent, and prior to the commencement of this action, without the license or consent of plaintiff, or any license or authority whatever, in the State of California, and northern district thereof, have wrongfully made, used and sold sewing machines containing and embracing the invention described, claimed and patented in and by the letters patent aforesaid.

That the sewing machines made, used and sold by the said defendants were and are, and each of them is and was, an infringement upon said letters patent No. 271,426, and were made and used ac-

cording to the specification thereof, all contrary to the law and the statutes of the United States, in that behalf made and provided.

Whereby, and by reason of the premises and the infringement aforesaid, the plaintiff has been greatly injured and damaged and deprived of large royalties, gains and advantages which he otherwise would have derived, and has sustained actual damages thereby in a large sum, to wit, one million ($1,000,000.00) dollars.

Wherefore, and by force of the statutes of the United States, a right of action has accrued to plaintiff to recover the said actual damages, and such additional sum, not exceeding in the aggregate three times the amount of said actual damages, as the court may see fit to adjudge and order, besides costs of suit.

Yet the defendants, though often requested, have never paid
651 the same, nor any part thereof, but have refused and still refuses so to do, and therefore plaintiff brings this suit.

JNO. L. BOONE AND
CHARLES F. HANLON,
Attorneys for Plaintiff."

Duly verified by Herman Cramer.

"*Special Demurrer of Singer Mfg. Co.*

Special demurrer of the defendant The Singer Manufacturing Company to the jurisdiction of the court over the person of this defendant.

And the said defendant, The Singer Manufacturing Company, by its attorneys, Messrs. Wheaton, Kalloch and Kierce, excepts and demurs to the complaint herein filed upon the one special ground that the said declaration shows that this court had no jurisdiction of this defendant, for the following reasons:

That said complaint shows that this defendant is a corporation created and existing under the laws of the State of New Jersey, and that it is an inhabitant of the said State of New Jersey; that the jurisdiction of the United States courts does not attach in this case because the plaintiff and defendants are citizens of different States, but because that such jurisdiction attaches on account of the subject-matter of the action, and that for these reasons the defendant is not liable to be sued outside of the said State of New Jersey, of which State only it is an inhabitant and citizen.

Wherefore, this defendant prays the judgment of this court
652 whether it has jurisdiction of this defendant, and asks to be dismissed with judgment for its costs; but, should the court overrule this demurrer and exception, this defendant then asks time and leave to answer to the merits, though excepting to the action of the court in overruling this demurrer.

WHEATON, KALLOCH & KIERCE,
Attorneys for Defendants."

With the usual certificate and verification.

"Demurrer of Willis B. Fry to Declaration.

The separate demurrer of the defendant Willis B. Fry, one of the defendants, to the declaration of the plaintiff, Herman Cramer.

The defendant Willis B. Fry, by his attorneys, Messrs. Wheaton, Kalloch and Kierce, demurs to the declaration on file in said action upon the following grounds:

1. That the said declaration does not state facts sufficient to constitute a cause of action against the said defendant.

2. This defendant demurs to the said declaration upon the ground that there is a misjoinder of parties defendant in this, that this defendant is joined as a defendant with the Singer Manufacturing Company, which is a corporation organized, created and existing under and by virtue of the laws of the State of New Jersey, and is therefore a citizen and resident of the State of New Jersey, and this court has no jurisdiction over it, and cannot therefore join it as a defendant herein."

Signed by the attorneys, and with the usual certificate and verification.

653 "At a stated term, to wit, the November term, A. D. 1893, of the circuit court of the United States of America, of the ninth judicial circuit, in and for the northern district of California, held at the court-room in the city and county of San Francisco, on Monday, the 27th day of November, in the year of our Lord, one thousand eight hundred and ninety-three.

Present: The Honorable Joseph McKenna, circuit judge.

H. CRAMER
vs.
SINGER MFG. CO. and W. B. FRY. } No. 11808.

Decision on the Demurrer.

In this cause the demurrers to complaint having been heretofore argued and submitted to the court for consideration and decision, now, on this day, the court being fully advised in the premises, it is ordered that the demurrer of Singer Manufacturing Company be sustained, and complainants allowed ten days to amend complaint, and it is further ordered that the demurrer of W. B. Fry be and hereby is overruled, and defendant allowed twenty days to answer."

Then follows a cost bill, verified in the usual way.

Then comes the order of the Honorable Joseph McKenna, circuit judge, as follows:

"In this cause an order having been made on the 19th day of December, 1893, dismissing this action as to the Singer Manufacturing Company, defendants herein, and ordering that judg-
654 ment of dismissal with costs and without prejudice to the commencement of another action by plaintiff be entered:

Now, therefore, by virtue of the law and by reason of the prem-

ises, it is ordered, adjudged and decreed that the above-entitled action be, and hereby is, dismissed as to said defendant, The Singer Manufacturing Company (a corporation), without prejudice to the right of plaintiff to commence another suit for the same cause of action, and that said defendant recover its costs herein," etc.

Then there is a certificate of the clerk of the court.

Then follows an amended declaration against the defendant Willis B. Fry, which is in all substantial particulars the same as the original declaration against the Singer Company and Fry, except the prayer, which is as follows:

"Whereby, and by reason of the premises and the infringement aforesaid, the plaintiff has been greatly injured and damaged and deprived of large royalties, gains and advantages which *they* otherwise would have derived, and has sustained actual damages thereby in a large sum, to wit, twenty thousand ($20,000.00) dollars." Signed by the attorneys in the usual form.

"HERMAN CRAMER, Plaintiff,
vs.
WILLIS B. FRY, Defendant. } No. 11808.

Answer to Amended Declaration.

Comes now the defendant above named and denies generally and specifically each and every allegation contained in plaintiff's
655 amended declaration on file herein, and says that he is not guilty of the grievances herein charged against him, nor of either nor of any of them, nor of any part thereof, and of this the defendant puts himself upon the country.

Further answering, defendant denies that the plaintiff is, or ever was, the original and first and sole or any inventor of the alleged improvements or any thereof in treadles for sewing machines, mentioned in said amended declaration and described in the letters patent mentioned in said amended declaration. Defendant denies that the said alleged improvements were, at the time of the alleged invention thereof, or are now, new and useful or new or useful. Defendant further denies that the said alleged improvements in treadles for sewing machines, or any thereof, now are, or ever were, an invention within the meaning of the patent law. On the contrary, defendant avers that the first conception or origination of said so-called improvement or improvements involved no exercise whatever of the inventive faculty, and that the first conception or origination thereof required nothing more than the usual knowledge of an ordinarily skilled mechanic.

Further answering, defendant denies that the said alleged invention or improvements or any thereof was not or were not known or used by others in this country before the alleged invention thereof by the plaintiff, and denies that at the time of plaintiff's application for a patent thereof the said alleged invention or improvement or improvements had not been in public use for more than two
656 years. Defendant denies that said invention or improvement had not been abandoned by the plaintiff prior to his

application for a patent therefor. On the contrary, defendant avers that said plaintiff was not the first or original or any inventor or discoverer of the alleged invention or improvement, or inventions or improvements, set forth in, or intended to be claimed in said letters patent; but that the said alleged inventions or improvements were, and each of them was substantially shown and described in the following-described letters patent, prior to the alleged invention and discovery thereof by the said plaintiff, to wit, United States letters patent No. 106,742, bearing date August 9, 1870, and granted to S. M. Wilcox, for a 'sewing-machine table.'

United States letters patent No. 148,759, bearing date March 17, 1874, and granted to John Reynolds and George Jacobie, for a 'treadle for sewing machines.'

United States letters patent No. 230,251, bearing date July 20, 1880, and granted to John E. Donovan, for a 'sewing-machine treadle.'

United States letters patent No. 243,529, bearing date June 28, 1881, and granted to John E. Donovan, for a 'sewing-machine table frame and treadle.'

United States letters patent No. 256,563, bearing date April 18, 1882, and granted to George W. Gregory, for 'treadle support for sewing machines.'

British letters patent No. 2,232, bearing date June 27, 1874, and granted by the government of Great Britain to Jules Bourdin, for 'improvements in means for transmitting motive power to sewing machines.'

657 British letters patent No. 2,653, bearing date August 7, 1873, and granted by the government of Great Britain to Josiah Turner, for an "improvement in sewing machines."

Further answering, defendant avers that he will prove, upon the trial of this suit, that the alleged inventions and improvements described and claimed, or intended to be described and claimed, in plaintiff's said letters patent, were and each of them was, long prior to the alleged invention thereof by said plaintiff, known to and used by the following-named persons during the years from 1862 to 1882 at the following-named places, to wit:

At Cleveland, Ohio, by H. C. Smith, who now resides at Cleveland, O.

At Cincinnati, Ohio, by John E. Donovan, J. Skardon and J. F. Elliott, who now resides at Cincinnati, O.

At Cincinnati, Ohio, by Wm. M. Burdge, who is now deceased, but who resided at Cincinnati, O.

At Cincinnati, Ohio, by Mrs. Wm. M. Burdge, who now resides at Cincinnati, O.

At Hartford, Connecticut, by George A. Fairfield, who now resides at Hartford, Conn.

At Westfield, Massachusetts. by Albert L. Dewey, Richard E. Morgan and Helen L. Dewey, who now resides at Westfield, Mass.

At Mount Sterling, Kentucky, by Philip L. Reese, who now resides at Mt. Sterling, Ky.

At Charlestown, Massachusetts, by Eben W. Keyes, who now resides at Charlestown, Mass.

At Chicago, Illinois, and in New York city, New York, by James Bolton, who now resides at Chicago, Ill.

658 At New York city, New York, by Lebbeus B. Miller, who now resides at Elizabethport, New Jersey.

At Chicago, Illinois, and at Elizabeth, New Jersey, by Philip Diehl, who now resides at Elizabethport, N. J.

At Cincinnati, Ohio, by Samuel C. Tatum, who is now deceased, but who resided at Cincinnati, O.

Further answering, as to the allegations contained in paragraph 3 of plaintiff's said amended declaration, defendant avers that he has no information concerning the facts alleged in said paragraph, and therefore denies that on the 25th day of May, 1882, or at any other time, or at all, the defendant filed his application in the United States Patent Office for a patent for said alleged invention or improvement, and denies that on the 30th day of January, 1883, or at any other time, or at all, letters patent for said or any invention were issued and delivered, or issued or delivered to said plaintiff, and denies that said or any letters patent granted to the said plaintiff, his heirs and assigns, or any of them, for the term of seventeen years, or at all, any exclusive or other right or liberty to make, or to use, or to *void* the said alleged invention or improvement throughout the United States and territories thereof. Defendant further denies that said letters patent were issued in due form of law, and denies that prior to the issuance of said letters patent, all proceedings were duly had and taken that were required by law to be had or taken prior to the issuance of letters patent for new and useful inventions.

Further answering, defendant denies that the plaintiff is now or ever was the sole and exclusive, or sole or exclusive owner
659 of the so-called invention set forth and claimed in and by said letters patent mentioned in said amended declaration, and denies that any right or privilege whatever was granted and secured, or granted or secured, by the said letters patent.

Further answering, defendant denies that defendant, either in violation of plaintiff's alleged rights, or disregarding the same, or contriving to injure or to damage plaintiff and his said rights, or otherwise or at all, either in the State of California and northern district thereof, or anywhere else, has wrongfully or otherwise made or used or sold sewing machines, or any sewing machine, containing and embracing the said alleged invention or improvement described and claimed in and by plaintiff's said letters patent.

Defendant further denies that any sewing machines which defendant has made or used or sold were or are, and denies that any of them ever was, or is, an infringement of said letters patent No. 271,426, and denies that they were, or that any of them was, made or used according to the specifications of said letters patent, or contrary to the law and statutes of the United States.

Further answering, defendant avers that during more than twelve years last past, the Singer Manufacturing Company, which is a cor-

poration created and existing under any by virtue of the laws of the State of New Jersey, and which has its principal place of business in the said State of New Jersey, has been carrying on the business of manufacturing and using and selling sewing machines of a particular kind, which have been known in the markets of the world as Singer sewing machines. That said corporation, the Singer Manu-
660 facturing Company has been doing a very large business during all of said years, and has manufactured and sold during said time a large proportion of all the sewing machines that have been manufactured in the whole world.

That during more than twelve years last past, the said corporation, the Singer Manufacturing Company, has had and maintained a place of business in the city of San Francisco, in the said northern district of California, where it has carried on a local business in selling the said Singer sewing machines, and which machines it sent from its factory in —— -sey to said city of San Francisco for that purpose. Defendant further avers that in carrying on its said business of selling said sewing machines, the said corporation, the Singer Manufacturing Company, has employed this defendant to act as its employee in making sales of said sewing machines and in attending to said local business in said city of San Francisco, and this defendant has acted as the employee of said corporation, the Singer Manufacturing Company in repairing, and using so far as it was necessary to use them for testing their condition, and in selling the said machines, and has done whatever was necessary in and about the carrying on of said local business in the city of San Francisco, as the employee of said corporation, the Singer Manufacturing Company, and in no other way or manner whatever. That he has neither made nor used nor repaired nor sold any sewing machines or sewing-machine treadles in his own right nor in his own name, but that all the making, repairing, using and selling of sewing machines or sewing-machine treadles that
661 has been done by this defendant, and which is claimed to constitute any infringement of said letters patent, has been the making or repairing or using or selling done and performed by the said corporation, the Singer Manufacturing Company, by and through this defendant as its employee, and in no other way. That this defendant has not, at any time, been the owner of any sewing machines or treadles, and has not, at any time, either made, or used, or repaired, or sold any sewing machines, or sewing-machine treadles, or sewing-machine apparatus, or sewing-machine attachments of any nature or kind, otherwise than as employee as aforesaid, or otherwise than as such acts were the act- of said corporation, the Singer Manufacturing Company.

Further answering, defendant avers that if the plaintiff herein has any cause of action arising out of the sale of said or any sewing-machine treadles by defendant, the said cause of action exists against said corporation, the Singer Manufacturing Company, and not against defendant, and that the defendant is not a necessary nor proper party to this action.

Defendant further avers that this court has no jurisdiction what-

ever over the said corporation, the Singer Manufacturing Company, and that this action has been brought against defendant because the plaintiff could not maintain an action in said district against the said corporation, and has been brought for the purpose of vexing and annoying the said corporation, and not because plaintiff has any cause of action whatever against this defendant.

662 Further answering, defendant avers that the sewing-machine treadles which the said corporation, the Singer Manufacturing Company, has sold through this defendant, as employee of said corporation, as aforesaid, and on account of the sale of which this action has been commenced against defendant, were constructed under and according to specifications and claims of certain letters patent of the United States No. 306,469, bearing date October 14, 1884, and issued to Philip Diehl, as assignor to said corporation, the Singer Manufacturing Company; and defendant further avers that ever since the issuance of said last-mentioned letters patent the said corporation, the Singer Manufacturing Company, and this defendant, as their employee as aforesaid, have had the right to make and sell sewing machines and sewing-machine treadles constructed according to the specifications and claims of said last-mentioned letters patent.

Defendant further avers that the state of the art relating to the manufacture of sewing machines and sewing-machine treadles, at the time of plaintiff's alleged invention and improvement in said treadles, as disclosed by the various letters patent hereinbefore cited, and by the testimony of the parties whose names are hereinbefore especially noticed and set forth, was such that plaintiff's said alleged invention or improvement, if any existed, was extremely narrow and trivial in its nature, and that the claims of his said patent were not and are not, and none of them has been or is, infringed by the manufacture or sale of treadles constructed according to the description contained in said letters patent issued as aforesaid to said Philip Diehl, assignor to said corporation.

663 Defendant further avers that when said plaintiff made his original application to the United States Patent Office for his said patent, he represented to said Patent Office in the specification which accompanied his said application that his invention consisted of a treadle, having a bar with V-shaped ends and resting in sockets constructed in the brace of the machine, and further represented to said Patent Office that said V-shaped treadle bar in the brace of the machine constituted the improvement or invention which he claimed. Defendant further avers that the specific elements and details of construction in combination, which are shown and described in the claims of plaintiff's said patent as they now appear therein, were not included in any claim or claims which accompanied plaintiff's said original application for said patent. Defendant further avers that plaintiff's said original application was rejected by said Patent Office, and that said Patent Office at the time of the rejection of said original application notified said plaintiff that his alleged invention was exhibited in United States letters patent No. 256,563, granted on April 18, 1882, to G. W. Gregory.

Defendant further avers that upon the rejection of plaintiff's said original application as aforesaid, the plaintiff filed in said Patent Office a new and first amended specification, and in his new and first amended specification represented to said Patent Office and claimed that his invention consisted of the brace of a machine, having sockets or bearings for a treadle bar, with mufflers at the end of the treadle bar, in combination with the treadle bar
664 itself. Defendant further avers that the specific elements and details of construction in combination, which are described and claimed in the claims of plaintiff's said patent, as they now appear therein, were not included in plaintiff's said first amended specification, nor in any claim or claims which accompanied plaintiff's said first amended specification. Defendant further avers that plaintiff's said application, when accompanied by said first amended specification, was again rejected by said Patent Office, and that said Patent Office at the time of said last-mentioned rejection, notified said plaintiff that his alleged invention, as described in his said first amended specification, was met by United States letters patent No. 243,529, granted on June 28, 1880, to John E. Donovan.

Defendant further avers that upon said last-mentioned rejection of his said application, the plaintiff filed in said Patent Office a new and second amended specification, and in his said second amended specification represented to said Patent Office and claimed that his invention consisted in the specific elements and details of construction in combination, as the same now appear and are described and claimed in the claims of plaintiff's said patent.

Defendant further avers that it was only by thus limiting his claims to the precise combination of specifically mentioned elements and details of construction of which the claims of his said patent are now composed, that plaintiff was able to obtain the issuance of said patent at all and that if he had not so limited his claim to invention in said Patent Office, no patent would have been granted to him at all.

665 Defendant further avers that by the aforesaid amendments of his specification, and by so, as aforesaid, limiting his claim to invention, the plaintiff entirely abandoned, in said Patent Office, any and all claim to a treadle hung or swinging generally in the brace of a machine, and is now estopped from asserting any claim to a treadle hung or swinging in the brace of a machine, excepting in the precise combination and precise manner, and in combination with the precise elements and exact details of construction shown and claimed in the claims of his said letters patent, as the same now appear.

Further answering, defendant denies that the plaintiff has ever been in any manner injured and damaged, or injured or damaged, on account of any act or acts of this defendant, and denies that by reason of any act or acts of defendant, plaintiff has been deprived of large or any royalties, or of large or any gains, or of large or any advantages which plaintiff would otherwise have derived, and denies that plaintiff has sustained actual or any damages by reason

of any act or acts of defendant either in the sum of twenty thousand dollars or in any other sum whatever, or at all.

Further answering, defendant avers that the cause of action set forth in the amended declaration on file herein is, and at the time of the commencement of this action was, barred by section 339 and subdivision 1 of said section of the Code of Civil Procedure of the State of California.

Wherefore, having fully answered plaintiff's amended declaration, defendant demands that he be hence dismissed with his costs in this action incurred.

WHEATON, KALLOCH & KIERCE,
Attorneys for Defendant."

666 With admission of service by Charles F. Hanlon and John L. Boone, attorneys for plaintiff.

Then follows an amended answer to the amended declaration, which is substantially the same as the original answer containing the same formal matters, and the same references to prior patents, and to parties who are alleged to have used the invention before the application for patent by Mr. Cramer.

"UNITED STATES OF AMERICA:

Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
WILLIS B. FRY, Defendant. } No. 11808.

Verdict.

We the jury find in favor of the defendant.

W. W. SHANNON, *Foreman.*

(Endorsed:) Filed April 12, 1895. W. J. Costigan, clerk. By W. B. Beaizley, deputy clerk."

667 "UNITED STATES OF AMERICA:

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
WILLIS B. FRY, Defendant. } No. 11808.

Judgment on Verdict.

This cause came on regularly for trial. The said parties appeared by their attorneys. A jury of twelve persons was regularly impaneled and sworn to try said cause. Witnesses on the part of plaintiff and defendant were sworn and examined. After hearing the evidence, and considering the motion of defendant's counsel that

the jury find a verdict for defendant; it was ordered by the court that said motion be granted, and thereupon the jury was instructed to return a verdict for the defendant on the ground of non-infringement, which was done as follows: United States of America, Circuit court of the United States, ninth circuit, northern district of California. Herman Cramer, plaintiff, *vs.* Willis B. Fry, defendant, No., 11,808. We, the jury, find in favor of the defendant. W. W. Shannon, foreman.

Wherefore, by virtue of the law, and by reason of the premises aforesaid, it is ordered, adjudged and decreed, that said de-
668 fendant (Willis B. Fry), have and recover from said plaintiff (Herman Cramer) the said defendant's costs and disbursements incurred in this action, amounting to the sum of $192.65.

Entered this 12th day of April, A. D. 1895.

W. J. COSTIGAN, *Clerk.*"

Then follows the certificate that the foregoing constitutes a true and complete judgment-roll in the said cause.

Mr. KALLOCH: We desire now, if the court please, to offer the opinion of Judge McKenna in the case of Cramer *vs.* Fry, No. 11,808, in which the judgment-roll has just been read, which opinion and decision appears in volume 68 of the Federal Reporter, commencing at page 201 and extending to and including page 212 of said volume. This decision is offered, not as proof of the existence of any fact which is stated to have been a fact in the opinion, but as showing the exact identity of the case now on trial with the case of Cramer *vs.* Fry, and as showing what the court decided in that case. We can produce, if the counsel requires it, a certified copy of the opinion.

Mr. MILLER: We object to it as utterly irrelevant, incompetent, and immaterial for any purpose whatever.

The COURT: I sustain the objection.

Exception Ninth.

To which ruling of the court the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

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FRIDAY, *April* 13, 1900.

H. B. ANGELL, called for the defendant, was sworn and testified as follows:

My name is H. B. Angell; age, 69; residence, 2200 Howard street. I have retired from business. My principal business since boyhood was the foundry and machine business. In 1847 I went into a shop as an apprentice. I have been at the business from that time up to within the last three years, both in the East and San Francisco. In San Francisco, since 1852. I served an apprenticeship as machinist and engineer.

Q. As proprietor, what business, if any, have you carried on most of your lifetime, and where?

A. Foundry and machine business in San Francisco. The Golden State & Miners, on First street, for about thirty-three years. During all that time I was a practical mechanic.

Q. Have you examined the drawings and specifications of the patent in suit?

A. I understand the entire construction and arrangement and operation of everything that is described in those letters patent.

Q. Please state whether or not, prior to 1880, it was a common well-known method of construction when revolving or oscillating shafts were to be placed in bearings, to have both bearings of such shafts attached to one solid metal casting?

A. It was.

Q. Have you any device here with you by which you can illustrate that?

A. I have. This is a device to hold a saw mandrel or saw arbor.

670 (The device referred to was here introduced in evidence as Defendant's Exhibit No. 21.)

Q. Please explain what Exhibit 21 is?

A. It is a frame with a saw mandrel, with pulleys and collars for holding the saw all in the frame in one piece, connected with two journals. The frame is cast in one piece for the purpose of connecting both journals of the arbor to keep it in absolute line. Saw arbors have been made and connected with their bearings in that way since about 1854. That is the first time I took special notice of them, and made them at that time.

Q. How extensively have saw arbors, made in that way, been manufactured and sold, to your knowledge?

A. Very extensively; thousands of them in use every year, and are sold every year.

Q. Can you name any other machines in which the two bearings of oscillating or revolving shafts were put in one and the same casting or metal bed?

A. Oh, yes; an ordinary engine lathe, or machine lathe, is invariably built in that way; that is, the head stock. The casting contains both journals, with a cone pulley usually between, the cone pulley being for the purpose of receiving a belt for driving the lathe. Those cone pulleys were mounted on the spindle or shaft running through this united casting, and usually with a flat face for a belt, but sometimes for a cord or round belt.

Q. How long have you known the head stocks of lathes to be constructed in that way, with bearings for the pulley shaft that you described?

A. The first lathe that I saw was made in that way. That was about 1846. The first one I worked on was in 1847, con-
671 structed in that way. That has been the ordinary method of attaching those pulley shafts in the head blocks of turning lathes ever since that date.

Q. How is it with regard to the tail stock of turning lathes?

A. In the same manner, with the exception there is no space for pulleys. Sometimes the head will be a continuous casting. Sometimes there will be two separate bearings, usually a continuous casting. In case of two separate bearings, they were arranged upon the same stand, the spindle passing through the two, and what we term a tail screw at the outside for pushing the spindle forward.

Q. Is it necessary, in those large turning lathes, to have the bearings of the pulley shaft remain in exact alignment with each other, and firmly in one place; that is, each bearing firmly in one place, so that it cannot be moved from its place?

A. It is absolutely necessary to have a proper-working machine.

Q. How heavy are the articles that are often put into those lathes and made to revolve by those pulley bearings?

A. Fifty or seventy-five tons. They are bored or turned on the outside, sometimes both. If there was any particle of play in those shaft bearings of the pulley shaft, there would be imperfect work. What we would term a slight lost motion would create a jar or a chatter, would leave the work rough, dug in small holes. It would not be turned in a true circle, neither true nor smooth.

672 Q. Can you readily call to mind any other machinery in which similar bearings of an oscillating or rotating shaft are put upon the same casting?

A. Yes, sir; high-speed engines are nearly all manufactured that way, and have been for a great many years.

The COURT:

Q. Do you say the journal casting is solid?

A. Yes, sir; both journals are contained in one casting, with a crank in the center of the shaft. It may not be in the center, but nearly approximately projecting through the journals on each side, with a pulley or fly-wheel usually on both sides, outside of the journal.

Q. The journals of the walking beam of a steamboat are not connected together?

A. No, sir; not by the same casting. They are connected by timbers on frames, and those frames are bolted together with stays between them. They are not on the same casting. With a high-speed engine, the casting is made in one piece. They are usually made the size that they can do that. With a beam engine, they are too large to make a casting. You might say, it would sink a boat to make a casting to carry a beam for a steamship.

Mr. WHEATON:

Q. Are those high-speed engines commonly small engines?

A. Yes.

Q. Have you ever had anything to do with oscillating steam-engines, in which the cylinders oscillate on trunnions?

A. Yes, sir, I have built a good many of them. I commenced building such engines in about 1866, in this city. Prior to 1880 I built probably 150 or 200.

673 Q. Have you seen these large oscillating steam-engines that have been sometimes used in steamships?

A. I have. I think the first I ever noticed of oscillating engines in a steamship was one that came up from Panama here about, I think, 1864.

Q. I show you a wooden model, which is already in evidence, and in which the wooden platform is supposed to oscillate. Suppose that those wooden pins upon which the platform oscillates, were trunnions of a steam-engine. What service do they perform other than to carry the cylinder of the engine?

A. One of them is for the purpose and provided with openings to receive and discharge the steam and enter the cylinder. Sometimes, in some cases, one trunnion receives the steam, and passes it into the cylinder, and the other one exhausts it, but usually, in the same trunnion, the steam is received and exhausts. The trunnion is hollow.

Q. How are those steam ports opened and closed in those oscillating engines?

A. By the oscillation of the cylinder. The ports are so constructed that as the cylinder operates to a certain point, it opens the port and lets the steam in, and at a certain other time it exhausts it, or, by opening the port in the steam chest and the trunnion.

Q. Do the trunnion and ports become the steam valves in those oscillating engines?

A. They do. The trunnion of the cylinder, and the trunnion chest or plate, become the steam valves.

674 Q. Now, supposing a change was made by which the trunnion, instead of operating as a trunnion, was made stationary, and a hollow cut in the edge of the cylinder to let the stationary end of that trunnion enter, and thereby support the cylinder. Could that be operated in an oscillating steam-engine in that way?

A. It could not.

Q. What is a trunnion as known in mechanics?

A. A trunnion is an arm, or two arms, projecting from a larger body, one upon each side, for the purpose of giving that larger body an oscillating or revolving motion.

The COURT: The trunnion does not give the motion. It enables the motion to be given to it.

A. I stand corrected.

Mr. WHEATON:

Q. Are any of those arms upon which the larger body oscillates or revolves ever known as trunnions, unless they are cast or made a solid part of the body which oscillates or revolves?

A. No, sir.

Q. Is it a common thing to have bodies oscillate and revolve upon other kinds of shafts?

A. It is. In that case they are called shafts.

Q. When a trunnion is mentioned in mechanics, do mechanics

always understand that that is an ear or arm that is cast or made a solid part of the body which oscillates or revolves?

A. A projection from a solid body upon which it can oscillate or revolve. It means the holding of it during that operation.

Q. In this patent of Mr. Cramer, what is it in that that he describes as oscillating?

675 A. The treadle.

Q. This patent says, "B represents the two trunnions, cast as a portion of the treadle and extending from its sides into loop-holes in the common cast-iron cross-brace C." In that respect, are the two arms shown in the treadle properly called trunnions?

A. They are. They could not be properly called trunnions if they did not oscillate with the treadle.

Q. Please explain your personal knowledge of the application of trunnions to cannons.

A. The cannons that I have made, have been made of cast-iron with trunnions cast one upon each side of the cannon near the breech, in order to balance the gun. The breech end of a cannon always is much heavier than the open end. The first one I recollect making was in about 1854. That was a breech-loading cannon, the first breech-loading cannon that I ever heard of at that time. That had trunnions, one cast on each side of the gun.

Q. What would be the objection, if any, to hanging the trun-ions on journals which would pass from the sides or the cheeks on the frame upon which the cannon itself would oscillate, the journal being rigid?

A. It would be perfectly impracticable. To put a hole in each side of the gun sufficient to admit a trunnion would necessitate the making of the gun so extremely heavy, or weakening it so that it would burst at the first few shots, or perhaps the first one. And then, again, with use, the hole would become enlarged, and there would be no practical way of taking up the lost motion; conse-

676 quently, it would be worthless. Where the trunnion oscillates with a cannon, there is a way provided of taking up the lost motion with a cap upon each side of the gun, upon what we term the cheek. Lost motion is caused by recoil of the gun, principally. The trunnions wear in the cheeks so as to make more room for motion. That is what I call "lost motion;" the wear of the trunnions in their bearings or cheeks.

Q. Supposing that the journals were rigid in the cheeks, and the wear was all in the side of the cannon. Why could not the lost motion be taken up there?

A. You cannot reduce the hole in which this plug or arm extends into the gun; neither can you enlarge the journal, unless you make a new one, which would be rather expensive.

A JUROR:

Q. As you state the trunnions have to be cast a part of the cannon, in making the cannon with the holes in the side of it, and having the bearings or trunnions in the side supports, would that

be a trunnionless cannon, or what part would you call the trunnion?

A. It would not have any trunnions. It would not be a trunnion. It would be a frame projecting through the cheek into a hole in the side of the cannon, to make what I could call a temporary mount.

Mr. WHEATON:

Q. As the holes in the cheek of the cannon are worn by the trunnion, and the lower part of the trunnion itself worn, do those trunnions still keep in contact with the bottom of the openings in the cheeks?

A. With the trunnions on the gun, I understand your question?

Q. Certainly.

677 A. Yes. In that respect the trunnions are always self-adjusting to the wear. In that respect, the description and action of trunnions correspond with what Mr. Cramer says in the specification of his patent, in these words: "By this construction, my treadle bearings are rigidly fixed, and in no way liable to get out of line or to require adjustment." The trunnions being cast upon the same piece, they would keep in line. The weight of it would keep it down to a fixed bearing, the same as a cannon, in the cheeks; it rests on the bottom to prevent it from recoiling or flying out of the cap over the cheek.

Q. How, in practice, are those caps used for taking up the lost motion that occurs from the wearing of the trunnions and other bearings?

A. They are provided with arrangements for that. In other words, the cap usually has small projections on the lower side that rest on the top of the cheek. When the trunnion becomes loose, those are dressed off until it is brought down to a bearing again to save the dressing of the whole cap.

A JUROR: I should like to have that definition in the Mechanical Engineers' Dictionary of a "trunnion" read to the witness.

Mr. MILLER: We have the definition given by Knight's Mechanical Dictionary here. It reads as follows:

"Trunnion: 1. (Steam-engine.) One of the hollow axes on which the cylinder of an oscillating steam-engine reciprocates and through which steam is received and exhausted.

678 "2. (Ordnance.) One of the cylindrical projections from the sides of a cannon or mortar which rests in the cheeks of the carriage, forming supports for the piece and and axis on which it turns during elevation or depression.

"3. A general term for an axis of similar character to the above."

The COURT: Now, the question is, Mr. Angell, as to whether or not, in your judgment as a practical mechanic, those three definitions are correct?

A. Two of them are. I think the third is larger than practice admits. In practice, I would not adopt the third definition.

Mr. WHEATON:

Q. Have you examined the specifications and drawings of the patent granted to the Singer Manufacturing Company, as assignee of Philip Diehl, which has been put in evidence here?

A. I have. I understand that construction there shown.

Q. I also call your attention to Exhibit "P," and ask you to state whether there are any trunnions in that machine on which the treadles are hung?

A. There are not.

Q. Is there any device there which has ever been known as a trunnion, or which could properly be called trunnion, without a misuse of the term?

A. There is not.

Q. Are there any bearings in the vertical double brace on which any devices whatever oscillate or revolve?

679 A. No, sir, there are not. I understand the mechanism mentioned in the first claim of the plaintiff's patent as follows: "The vertical double brace joining the legs of the two ends of the sewing machine, provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings substantially as specified." There is a vertical double brace in this Exhibit "P." There are no holes through its lower extremities which serve as bearings. There is no treadle provided with trunnions in Exhibit "P." There are no trunnions there which are fitted to oscillate in any bearings which are in the lower extremities of the double vertical brace.

Q. I present to you Exhibit No. 10, which is one of the stands that was used by the Singer Manufacturing Company before it adopted the Diehl stand. In this Exhibit No. 10, or trade-mark stand, do you find a double vertical brace?

A. There is. The lower ends of that brace are fitted to the web of the legs, with a bolt at each end near the lower end of the leg.

Q. Provided you treated the point-center bolt that passed through the parts the same as a trunnion, calling that a trunnion, or the equivalent of a trunnion, would it then be the same combination of parts that I have read to you from the first claim of the patent?

A. No, sir, it would not. There would not be any enlarged hole for the reception of the trunnion.

Q. Would it be the lower end of the brace connected with

680 the end of a treadle in such a way that the bearings at each end would not get out of alignment with each other?

A. Yes, sir.

Q. What difference would it make in the operation or result, to make that change in this trade-mark stand?

A. It would make no difference in the result.

Q. Would making that change involve anything in the shape of invention or not?

A. It would not.

Q. What is the difference in operation between a point center, such as is shown in this trade-mark stand, for the treadle to swing on, and a trunnion?

A. The point center is the easiest of adjustment; if it wears, it is easier to adjust it than a knife-edge bearing, and can be kept closer, tighter in operation. To take up lost motion in these point centers, turn the center up a little closer, or screw it a little further in. This trade-mark stand has no tie-rod in connection with the treadle, the vertical double brace supplies the place of that tie-rod. It is made strong enough to keep the legs from swinging the lower extremities of the vertical brace for spreading.

Q. Would there be any improvement whatever inward, and letting the bolt pass through them, into the end of the treadle, as compared with the arrangement as it is now in the trade-mark stand?

A. No, sir, except, perhaps, a little in manufacturing. You would save one or two bolts in each and every machine, cheapen the cost. In saving one bolt, they would have to make the other considerably longer. I believe there is very little difference.

681 Afternoon session.

FRIDAY, *April* 13, 1900.

H. B. ANGELL—Direct examination resumed.

Mr. WHEATON:

Q. Mr. Angell, I show you now one of the exhibits in the case, the trade-mark stand, and ask you if you have examined it and understand it, and its entire construction?

A. I have, I thoroughly understand it.

Q. Now, comparing that with the regular Diehl stand in a Singer sewing-machine stand, put together side by side, explain what changes took place in converting or substituting the Diehl stand for the trade-mark stand.

A. In the trade-mark stand, the vertical cross-brace comes down and is attached to the leg on each end of the machine, and the treadle is hung in the upright legs with a conical-pointed screw. In the Diehl model, the vertical cross-brace continues down and forms a tie-brace across the bottom, below the treadle, the treadle being hung in the cross tie-brace with conical-pointed screws and check-nuts. The cross-brace is also constructed with a loop in its upper part to carry the band wheel. In the Diehl stand, the treadle, the vertical cross-brace, and the tie-brace at the bottom, and the band wheel, are all united in one structure.

Q. You have spoken of a cross-bar in the Diehl standard. Please explain what you mean by that.

A. The cross-bar or tie-brace extends from the vertical cross-brace down below the treadle and across from side to side of the machine with pointed screws, for the purpose of hanging the treadle
682 or allowing it to oscillate in that lower cross-brace. In the Diehl standard the treadle is hung in that cross-tie. In the Cramer patent, the treadle is not hung in any cross-tie.

Q. Explain the difference in action between a conical pointed device and a knife-edge device, for supporting the oscillating treadle.

A. A knife-edge trunnion bears upon the bottom. The pressure

is downward. With a pointed screw, the pressure is down and outward, to force it apart. That is one reason why a pointed screw is seldom used except on a very light machine—the tendency to spread apart.

Q. Please state whether or not the conical pointed screws have the same tendency to spread the bearings of the treadle apart that the conical collars have in cases where conical collars were put on a rod, and the treadle hung in them.

A. The result is the same; the same tendency.

Q. In that respect, is the action of cone shapes different from the action of a knife-edge, as devices for the treadle to oscillate upon?

A. It is.

Q. I want to ask you whether you can find in the Cramer patent any of the changes which you find existing between the defendant's old trade-mark stand and the defendant's present Diehl stand?

Mr. MILLER: I object to the question as irrelevant, immaterial, and incompetent, being purely argumentative, and not asking for a question of fact.

The COURT: I sustain the objection.

683 *Exception Tenth.*

To which ruling — the court, the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, to the court to sign and seal, and the court does hereby sign and seal the same.

Mr. WHEATON:

Q. As devices for suspending the treadles of these machines, please state whether these conical-pointed screws are the mechanical equivalents of trunnions with knife-edge bearings.

A. They are not.

Q. Do they operate in the same way as trunnions operate?

A. They do not.

Q. In the Diehl patent, as a matter of fact, is the treadle suspended in the vertical cross-brace?

A. No, sir, the treadle is suspended in the cross-brace, not the vertical cross-brace. The vertical cross-brace and the cross-brace verge in one at a certain point.

The COURT:

Q. Do you mean to say there is a vertical cross-brace and a horizontal cross-brace in that Diehl mechanism?

A. I do, yes.

Q. At a certain point in the Diehl treadle, then, a horizontal cross-brace ensues in the tie-rod?

A. Yes, sir.

Q. Different and distinct from the vertical cross-brace?

A. Yes, sir. If it were not for that, those conical-pointed screws would have a very strong tendency to spread those legs and let the treadle become loose.

684 Q. Is it your view that that horizontal brace or tie-rod is of necessity in the case where the pointed screws constitute the bearing?

A. Practically, yes.

Q. If the knife-edge bearing was used instead of the conical-shaped bearing, the cross-rod would not be required?

A. It would not, the pressure being all down, with no tendency to force it sideways.

Q. Then you could substitute in the Diehl patent a knife-edge bearing for the treadle, and discard the cross-rod or tie-rod, without any injury to the mechanism?

A. Yes, sir.

Mr. WHEATON:

Q. What is this stand that I now show you?

A. That stand is without a lateral cross-brace or vertical cross-brace. It only has a cross-brace offsetted near the bottom with a treadle hung in that tie-brace near the bottom of it, extending across under the treadle.

(The stand referred to was here introduced in evidence and marked Defendant's Exhibit No. 22.)

Mr. WHEATON:

Q. Is this one of the Diehl stands, with the cross-brace cut out?

A. It is, it still contains the treadle and the treadle bearings with the cross-brace so cut out?

Mr. WHEATON: Of course, this is offered for the purpose of showing that the treadle is in the lower cross-brace or tie-rod.

Q. I now show you another mutilated Diehl stand, and ask you to explain how it is made.

685 A. The vertical cross-brace in that machine carries the band wheel, and is fast to the legs with a bolt on the bottom at each side, and the treadle is hung in the cross-brace independent of the vertical cross-brace.

Q. As the double cross-brace is bolted to the web of the legs in this stand, does it differ any from the manner in which the vertical cross-brace was bolted to the web of the legs in the trade-mark stand?

A. No, sir.

Q. As the treadle is hung, does it differ any from the method in which the treadle is hung in the regular Diehl stand?

A. Except in it being lower, near the floor.

(The stand referred to was here introduced in evidence and marked Defendant's Exhibit No. 23.)

Q. Does this Bent machine which is already in evidence as the old vertical brace machine, show the treadle hung in bearings in the lower extremities of the vertical double cross-brace?

A. Yes, sir.

Q. Can you see any different result obtained by Cramer from that obtained by the construction shown in that Bent machine?

A. No, sir; there is no difference in the result at all.

Q. What is the construction shown in this stand now shown to you, called the George P. Bent Old Crown cross-brace treadle-bearing sewing machine?

A. The treadle in that is hung upon the cross tie-rod, or brace at the bottom, with each end turned up; the screw being tapped into that leg and projecting through inwardly sufficient to give the treadle a bearing, with a lock-nut on the outside to hold the cross-tie firm to the leg or legs.

686 Q. How much of that construction, if any, do you find in the regular Diehl stand?

A. The pointed screw that holds the treadle in the Diehl does not pass through the leg; otherwise it is the same.

Q. Do you find any of this construction in the Cramer patent?

A. I do not.

Q. Please look at the Bourdin model now shown you, and state whether the treadles in that case are hung in the double vertical brace.

A. They are.

Q. Please look at the drawings in this English patent to Bourdin, and state whether the treadles are hung in that model as shown in those drawings.

A. They are.

Cross-examination of H. B. ANGELL.

Mr. MILLER:

Q. Please take that model, Exhibit "P," known as the Diehl stand or brace, where does the end of the vertical brace commence, and where does it cease?

A. It commences at this point where it is fastened to the leg, and ends at the lower point where it is fastened to the leg. Instead of the cross-brace being connected to the frame, it is cast in one piece, uniting the vertical cross-brace and the tie-brace. They are cast in one piece. So that the two are all parts of one integral structure, as far as the casting is concerned.

Q. Do you say that in that construction the treadle is not mounted in the vertical brace?

687 A. It is not. I base that opinion upon the model itself.

Q. Let me show you the Diehl patent, under which that model, Exhibit "P," is built: "This treadle is supported in the lower portion of said brace, which I prefer to make as shown," etc. Does not that patent say that that treadle there is mounted in that brace?

A. In the lower portion. When it verges together, it becomes, to a certain extent, a portion of the vertical brace. It becomes so when it is verging together.

Q. Is this statement true or not which I read to you from the pat-

ent: "This treadle is supported in the lower portion of said brace, which I prefer to make as shown," etc.?

A. I suppose you can call it the lower portion. It is a portion.

Q. Then, if it is a portion of the vertical brace, then the treadle is mounted in that lower portion of that vertical brace, is it not?

A. No, sir. The whole casting includes the cross-bar. The cross-bar becomes a part of the brace, being the lower portion of it.

Q. If the treadle is hung in that cross-bar, and the bar is part of the brace itself, then the treadle is hung in the brace, is it not?

A. I do not consider it so. I do not consider that the patents so states practically. I do not construe that language that way. That cross-bar is not the vertical cross-brace.

688 Q. Suppose you were to cut off this bar, as you call it, at the point just below the screw, and remove it entirely from the machine, would the treadle be hung in the vertical cross-brace then?

A. It would be hung on lugs projecting inwardly from the vertical brace.

Q. After you have cut away the bar in the way I have stated, and no other change, would the treadle then be hung in the vertical brace or not?

A. No, sir. It would be in lugs cast to the vertical double brace. It would not be hung in the vertical double brace?

Q. I will read another statement from the patent: "This cross-bar may, however, be omitted and the treadle hung directly on downward projections from the brace." In that case, the treadle is hung in the brace, according to this patent?

A. If it is hung on downward projections, it would not be a brace. It would not be the vertical brace if it is below that fastening. The brace ends at that fastening.

Q. You admit that the treadle in that case would be hung in these downward projections, which are a part of the brace, do you not?

A. No, sir; the double vertical cross-brace ends at this fastening at the lower end, and whatever projection there is below adds nothing to it, or takes nothing from the strength of that brace, consequently it is not in that brace. That is my opinion as a mechanical expert.

Q. I want to read you another portion of this patent. Claim 4 reads as follows: "The combination, with the cross-brace of
689 a sewing-machine stand, of a crank shaft and a treadle, both mounted in the said brace, substantially as set forth." Do you not understand from that language that the patentee intended to mount the treadle in the brace, and by the construction shown in his patent it is mounted in the brace, according to his opinion?

A. I cannot say what his idea is. I am speaking of the fact as it is.

Q. Does that not mean that the patentee mounted his treadle in the brace, according to his meaning of it?

A. A combination of the brace, the vertical cross-brace and the tie-brace, the wheel and treadle is mounted in that combination.

Q. And the treadle in that combination is mounted in the brace, is it not?

A. It is mounted in that combination; yes.

Q. I show you this catalogue of the Singer Sewing Machine Company, of 1889, and call your attention to page 7, with a picture of a machine there. You recognize that picture as the same thing, so far as the stand is concerned, as this Diehl stand?

A. Yes, sir.

Q. I read you this: "Above cut shows the I. F. machine mounted on a simple and elegant form of cabinet-work, which is very popular with those who require a machine for daily use. It also shows the new (patented) and light-running stand, upon which all our family machines are mounted, with band wheel and treadle entirely supported within the brace, insuring accurate adjustment and
690 ease of operation." Do you agree that that is a correct statement of the matter there, that both the band wheel and treadle are entirely supported within the brace, or is that contrary to your view of the thing?

A. I do not agree to that statement. The band wheel is supported in the brace. The treadle is supported by lugs, or by cross-bars connecting to the vertical brace, becoming a part of it, but not the vertical cross-brace.

Q. I read you another portion of this catalogue, on page 5: "On pages 6 to 17 inclusive, we have illustrated our latest family machines, our improved stand, and our various styles of cabinet-work, to all of which we invite the attention of purchasers. The machines are easy to run, convenient to operate, durable, and fill all the latest requirements for every variety of family sewing. The stand is fitted with adjustable cone bearings throughout, admitting of close adjustment, and reducing friction to a minimum. These bearings being entirely within the brace, the adjustment is not affected by any strain which may be put upon the stand." Do you agree with that statement that those treadle bearings are entirely within the brace?

A. No, sir; I cannot say that they are. The treadle bearings are in the cross-brace. After you leave the point of connection with the leg, you leave the vertical cross-brace.

Q. I show you another catalogue of the Singer Manufacturing Company, one in evidence, published in 1885, and I call your attention to page 24. Do you not find upon that a representation of the Diehl standard, the same as this Exhibit "P"?

691 A. The Diehl standard with the band wheel mounted in the vertical brace, and the treadle mounted in this cross-tie below, and not in the vertical brace.

Q. This reads as follows: "The above figure shows our new stand brace, with dress guard and belt-shifter fully covered by patents. The balance-wheel and treadle have their bearings entirely independent of the stand (or legs), thereby assuring a correct adjustment and easy action." Do you agree with that statement?

A. That is correct.

Q. What is the advantage of having those bearings entirely independent of the legs?

A. For convenience of manufacturing. You can put this portion of the machine together, the vertical brace, the treadle, the wheel, the pitman, ready for work and let them go out and be put into a machine. It saves expense. It also insures a correct adjustment and easy action.

Q. It proceeds to say: "This device prevents the 'building' which so often follows a slight displacement of the supports of the machine, a difficulty rarely appreciated, except by a skilled mechanic, which hitherto it has been considered impossible to remedy." What is the meaning of that term "building" in that connection?

A. That is the making of the machine. The building of the sewing machine itself. That is what I understand.

Q. Let me read it to you again: "This device prevents the 'building' which so often follows a slight displacement of the supports of the machine, a difficulty rarely appreciated, except by a
692 skilled mechanic, which hitherto it has been considered impossible to remedy." You still think it refers to the building of the machine?

A. Yes, sir, I do. It is easy to be seen that while it is all in one casting, it can be put together accurately, or nearly so, in the works before it goes outside, consequently it overcomes, to a great extent, the trouble of putting it together outside of the works, or adjusting it It requires no adjustment after it leaves the works.

Q. You said that a trunnion was a projection necessarily cast with the body to which it was attached.

A. Cast or forged. It becomes a part of that body. It can be a forged trunnion, or a cast trunnion.

Q. Taking this wooden model, Plaintiff's Exhibit "R," you notice those projections on the side?

A. Yes, sir.

Q. Are those trunnions?

A. Yes, sir.

Q. You notice those come out?

A. Probably.

Q. They are not cast with the piece?

A. That is not cast. It is a piece of wood.

Q. It is not a permanent part of the piece itself?

A. No, sir; it is not.

Q. When I put it in there, then it is a projection on the end of that piece, and is a trunnion?

A. It is not a permanent part to operate as a trunnion. If there was any weight on it, it would very soon get loose and would not answer the purpose of a trunnion.

Q. As I hold it in my hand now, is it a trunnion?

A. It is.

Q. When I put it into the socket or hole for it to work in, it is still a trunnion?

A. It certainly is.

693 Q. Is there any difference in the operation, if I take it out of this piece where I had it before, and put it in the side piece? I have not changed it in any way, have I?

A. It is not a trunnion in that shape. It is an arm projecting out from the box.

Q. A trunnion is an arm projecting from another piece?

A. From a larger body.

Q. This is an arm projecting from a larger body?

A. Projecting from a box, a standard.

Q. When I put it in there in this piece, as I have shown, and then put it into that position and operate it, it operates just the same as it did before, does it not?

A. No, sir; it is not a trunnion in that shape. It is simply an arm projecting out from the standard.

Q. It accomplishes the same object that it did before, does it not?

A. No, sir. A trunnion is a body projecting from a larger body upon which it oscillates or revolves, and there is no trunnion there in that sense of the word.

Q. You have undertaken to give a definition of a trunnion. I will show you Knight's Mechanical Dictionary. Is that not a standard authority in the mechanic arts?

A. That is an old standard. It has been known for many years.

Q. Here is the definition he gives of trunnion: "1. One of the hollow axes on which the cylinder of an oscillating engine reciprocates and through which steam is received and exhausted. 2. Ordnance.—One of the cylindrical projections from the sides of
694 a cannon or mortar which rest in the cheeks of the carriage, forming supports for the piece, and the axis on which it turns during elevation or depression. The trunnion is usually one caliber in diameter and length. 3. A general term for an axis of similar character to the above." That is the definition given by Knight's Mechanical Dictionary. Do you not agree with that definition?

A. I agree as far as a trunnion is concerned, yes. A trunnion must move with the larger body, must be a portion or projection that helps to maintain that body, whether it be a cannon, or whether it be an oscillating engine, or some other device. It must be a journal in which that portion of the machine or mechanism operates or revolves. I think the third definition there is very blind. I do not think a trunnion in mechanics can be applied to any stationary object. I don't think that Mr. Knight says that a projection from a standard upon which a body revolves or oscillates is a trunnion. I don't think he says that. Whenever the projection from the article like a steam cylinder or like a cannon, becomes stationary, does not have a bearing to oscillate on, or that it cannot be oscillated on or rotated on, it is not a trunnion.

Q. You understand, of course, the construction of a hinge, when there is a pin of a pintle on one part that extends into a circular orifice or hole on the other side, called the male and female part of a hinge?

A. Yes, sir.

695 Q. Where is it usual to place those parts with respect to the gate and the gate post? On which one do you place the male part, and on which the female part?

A. The male part is usually placed on the post.

Q. Suppose you were to reverse that and put the male part on the gate. Would there be any difference in the operation of swinging the gate open?

A. If you should reverse them the gate would fall down. There would be nothing to hold it in place, and it would fall down.

Q. Then in hanging the door, you are bound to fix the hinge in the way you have stated, with the male part on the post, and you cannot fix it the other way?

A. It depends upon the hinge. You are asking me in regard to a common cast-iron butt, loose joint?

Q. Yes.

A. I am familiar with those terms.

Q. Take any other kind of a hinge, then.

A. You take the latest style of hinge, where they fit into a point with each other, those are reversible, and you can put them on either way. You can turn the hinge over. It would not make any difference with that kind of a hinge. It would make a difference, most assuredly, in the ordinary hinge.

Q. Take that model of the Deihl machine for a moment. You notice in that that the point-center bearing goes from the outside of the casting inward toward the treadle?

A. It does. It fits into a recess in the treadle. That makes the bearing.

696 Q. Suppose you were to reverse that, and were to take this screw out from this side and insert it through the inside of the treadle, and were to make a conical bearing in the side of the brace. Would there be any difference in the operation of the machine?

A. Not in operation, no. There would in the construction. It would be difficult to get a screw in there, unless you left large holes. It would be in the way of the foot, and it would be mechanically not a good device.

Q. Do you mean to say that if the screw is put in there it will be in the way of the foot?

A. The nut would probably project above. You would have to increase the depth of the treadle, in order to leave room for it. So far as the swinging or oscillating of the treadle is concerned, it makes no difference whether the point centers come from the outside in, resting in sockets in the treadle, or whether they come from the treadle to the outside and rest in sockets in the brace. The treadle bearings would be kept rigidly in line by that construction and would be adjustable the same as before, and accomplish the same object that they did before, so far as operating the treadle was concerned. There would be just as little friction as there was before.

Q. In that case, would you call the point centers that come from the treadle trunnions?

A. No, sir; I should not. I should call them point centers.

Q. I show you this model, Plaintiff's Exhibit "S," which has a point center made of wood inserted into a hole, which is substantial-y the same kind of construction that I was referring to a moment ago, in this model. Is not that a trunnion?

697 A. No, sir; it is not. It is a pointed center, a conical point. It is a projection from the side of the body. It is not a trunnion.

Q. Why is it that it is not a trunnion, in the form in which it is now?

A. In the first place, a trunnion is supposed to be some device that will hold a pretty heavy weight, a heavy pressure, and the pointed center will not do that. For instance, in an oscillating engine, the cylinders are in many cases very heavy, and there would be many tons of pressure. And to mount that upon points, it would be practically impossible.

Q. I am asking you about it now, as I hold it in my hand?

A. No, sir, it is not. It is a point center, a conical point.

Q. What is there that prevents it from being a trunnion?

A. Because it will not fulfill the requirements of a trunnion.

Q. Is it not a fact that, according to your definition, that the only requirements of a thing in order to make it a trunnion are, that there shall be a body or arm extending from another body or piece, and cast or forged integrally with it?

A. Sufficiently rigid to maintain the weight or pressure required for it to maintain.

Q. Then you limit the term "trunnion" to the use of it in an oscillating steam-engine and in the cannon, do you?

A. No, sir; in other similar devices as well.

698 Q. Or any other device where weight is to be carried?

A. Yes, sir; where a large weight has got to be carried.

Q. Then it is because this is small and light and not intended to carry a heavy weight, that it is not a trunnion?

A. No, sir, not in that definition. The reason that that is not a trunnion is because the pressure upon that point is outward, and in a trunnion it is not. The weight upon that would have a tendency to burst this asunder, or force it apart, one from the other, while a trunnion bears directly down and has no tendency whatever to force apart.

Q. The trunnion of a cannon is the arm or projection that extends from the side of the cannon?

A. Yes, sir.

Q. The trunnion is there whether it is placed in the gun carriage or not?

A. Yes, sir.

Q. And if you were to make the ends of that trunnion pointed, it would still be a trunnion?

A. If it rested upon the points, no.

Q. I have just told you that it was not resting upon the points or upon anything else. It is a cannon lying down on the ground before it is mounted?

A. The straight part of it, or parallel part of it, would be a trunnion.

Q. Then in this case the parallel part here would be a trunnion, but the pointed part is not a trunnion?

A. The pointed part is not a trunnion. The balance of it could be. It would not be any stretch of language to call it a trunnion.

699 Q. Look at this drawing that you referred to a moment ago of the Bourdin English patent. I call your attention to figure 5 of the patent and the way in which the treadle is mounted. You find two treadles there?

A. Yes, sir. They are mounted on a round rod. They are held in position on that rod by means of conical collar- and set-screws, so as to keep them in place, and that rod is solidly attached to the two ends of the vertical brace, and when the treadles oscillate, they oscillate on the rod. The rod does not move at all. The rod has no bearings on which it moves. It has a bearing in the vertical cross-brace, but not a movable bearing. In this model, the treadles oscillate on a rod. They are held in place by conical collars. The conical collars are on the rod, and they have set-screws to hold them in place. The two treadles oscillate upon those collars which are upon the rod.

Q. When the collars wear from friction caused by constant use, and the set-screws get loose, then the tendency would be for the treadles to move back and forth on the rod?

A. Yes, sir; to a certain extent. Set-screws are not very apt to get loose, in any kind of a machine. I have heard of set-screws in a bicycle getting loose. That is from fast motion, and oftentimes they get dust in there that makes them bind.

Q. Is it not a fact that in the old construction of cones and set-screws upon a rod upon which the treadle was mounted, the cones would wear and the set-screws get loose?

700 A. I think my folks had a sewing machine mounted that way for twenty-five years, and they never had any trouble with it. I never heard of the collars getting loose.

Q. I am asking you as a mechanic whether it is not true that where a treadle is mounted on conical collars held in position by set-screws, on a rod—is it not a fact that those collars will wear and the set-screws get loose in the operation of the machine?

A. Well, in a sewing machine I don't consider that it makes any difference whether the treadle is absolutely tight, or whether it has got an eighth of an inch or a quarter of an inch play. I don't think it makes any difference. I think the machine would run just as well.

Q. Do you think it would be possible, where a treadle *as* mounted on a rod that way and the rod extended into the legs, that the constant pressure of the foot on the treadle would be enough to bend the rod?

A. No, sir; I think not. If it should be possible, it would be because the machine was very much out of order.

Q. I show you an old construction, Plaintiff's Exhibit "E," in

which the treadle is mounted upon a rod and held in place by conical collars and set-screws. In that kind of a construction, from the constant motion of the treadle, would not the set-screws get loose and the collars wear, and would not that be a great detriment to the machine?

A. No, sir, I think not. The set-screws would not be apt to move; they are not supposed to move. In mechanics, we
701 consider that a collar as a device to hold a thing from moving endwise, is safe. My observation as a mechanic is that a construction of the kind such as you have just shown would not be liable to any such objection as you have specified.

Q. I show you some set-screws here that are on this rod which appear to have been used and worn to a considerable extent, and to have got loose on the rod. Do you not see that those set-screws have become worn?

A. Yes, sir. The cause of that wear is probably that that machine had been run for years without a drop of oil being put on those collars.

Q. If the machine should wear in that way, would that not be a detriment to the operation of the machine?

A. No, sir, I don't think so. I think a machine with those as loose as they are here now and worn as much as they are, would operate all right. I don't say I would be satisfied as a mechanic with that kind of a machine. It would not rattle and make a noise, not with the foot upon the treadle, which holds all that motion down to the bottom. Unless the foot is constantly taken off, or an extra pressure is put on, which would naturally throw the treadle up to make a noise, there would not be any rattling or noise. That would be true where these collars are loose and worn. It would make no noise, except in the event that you do not press the foot upon the treadle regularly, or take it off the treadle when the machine is running fast. Then the treadle would bounce up and make a noise.

Q. The truth of the whole matter is, that with that kind of a
702 construction, with the set-screws loose and the collars worn, you would find no objection to the operation of the machine?

A. I don't say that. If I was going to buy a machine I think I should look for a later machine. But I do not consider that there is any objection whatever to the ordinary wear of a collar in the operation of the mechanism. I know as a fact that the Singer Manufacturing Company formerly used a construction consisting of cones and set-screws, and that they subsequently abandoned that and began to use and have used ever since their present construction. It is the object of every manufacturer of a special article to try to keep up with the times, to get small improvements enough to hold his machine in preference to any other. They all strive for that, and for the purpose of cheapening the manufacture at the same time, without destroying its utility.

Q. Does this Diehl construction, in your judgment, cheapen the construction of the machine?

A. I think it does. There are less parts to it. Not only that, there are less parts to cast, and less parts to fit together. This whole arrangement or mechanism is cast in one piece, and it is no more work mechanically to cast the whole of that than would be the case if it were smaller. Consequently they have gained that much in time. And then in the fitting in the shop, this can be fitted up by the thousands in the shop and put together, the band wheels and all and sent out of the shop, and the pitman put on, and consequently it does not require the time to erect a machine after it leaves the shop that it would if it was all in separate pieces.

703 It would not require as much skill to set up a machine of the Diehl construction and adjust it and put it in the proper construction, as it would with the old construction where it had the cones and set-screws. That is what I meant by "keeping up with the times and modern improvement." The construction is of benefit in manufacturing. A man is enabled to make more money out of it at the same price.

Q. You have been in the business of manufacturing machinery heretofore?

A. Building machinery to order and repairing.

Q. And you have been building different kinds of machinery?

A. Yes, sir.

Q. You are not familiar with sewing-machine mechanisms as you are with the mechanism of other machines?

A. No, sir. I am more familiar with other machinery, like engines, pumps, saw-mills, quartz mills, flour mills, dredger machines, and steamboats, and that class of machinery. But we used to have what we called an experimental shop. We kept from one to twenty men working on different kinds of models and machines that parties thought the best thing in that line. I was an expert in that general class of machinery.

Q. But you did not claim to be an expert in the special line consisting of the mechanism of sewing machines?

A. I never have built any sewing machines. I have taken them apart and repaired them up and fixed them up for my own use, for the use of my own household. I do not consider myself a sewing-machine expert.

704 Q. You are not familiar with the different steps that have been taken from time to time in the sewing-machine art, where the companies have changed first to one style, and then to another?

A. Well, you might say not perfectly familiar, although I have been pretty well acquainted with them.

Q. Do you see any benefit, or is your knowledge of the art sufficient so that you can state whether you see any benefit in mounting the treadle in the vertical brace or in projections from the ends of the vertical brace, instead of mounting it in the legs or on the rod of the machine?

A. There is no advantage, except in construction. The whole mechanism could be put together in the shop, and it could be done easier.

Redirect examination of H. B. ANGELL.

Mr. WHEATON:

Q. Can you get any better or more permanent alignment for the treadle bearings by putting them in the brace than can be had by putting them in the legs of the machine?

A. No, sir.

Q. Has there ever been any trouble or difficulty in all or any kind of machinery where there are different bearings in line with each other, in getting those bearings in exact alignment with each other?

A. No, sir.

Q. Has it always been the practice in such cases among mechanics to always get the alignment of bearings, where there was more than one bearing on a shaft, perfect with each other?

A. Practically, yes; mechanically in line. You may say not perfect. That is a term that I very seldom use, because when
705 you come down to mathematically correct, there are very few things made that way. But practically, commercially correct, yes, sir. There is no such thing as absolute correctness and precision in any machine. No machine would be considered fit to send out for business where it had two bearings on the same shaft, unless those bearings were mechanically and commercially in perfect alignment with each other.

The COURT:

Q. When you say "commercially," you mean practically, for all purposes, in alignment?

A. Yes, sir.

Mr. WHEATON:

Q. Would Mr. Cramer's device make the alignment any more perfect than where the treadles were hung in the legs instead of in the cross-brace?

A. It would not.

Recross-examination of H. B. ANGELL.

Mr. MILLER:

Q. Would Mr. Cramer's scheme of alignment be any better than the scheme of alignment exhibited by those treadles which were hung on a rod with cones and set-screws?

A. No, sir, I don't think so.

Q. Would the scheme of alignment that is shown in the Diehl construction be any better than what was shown in the old cones and set-screws?

A. Mechanically, yes, sir. It was easier made, easier adjusted.

Q. Then the substance of the whole business is, that you think the Diehl construction is a good one, and that the Cramer construction is not good?

A. I don't say so, sir. It would be practically impossible
706 to introduce a treadle like the Cramer treadle. It is too awkward. I mean to introduce it into the market, not into the machine.

Q. Your idea is, then, that it would be impossible to introduce the Cramer device into the market?

A. To any extent.

Q. In this Bourdin model, how are the treadles placed on the rod?

A. With cone collars.

Q. How do you get the collars off?

A. They are slipped on the rod with the treadle before the machine is erected.

Q. In other words, you put the collars and the treadle on the rod before you put the rod in the machine?

A. Yes, sir. Then the rod is solidly attached at each end to the vertical brace.

Q. If one of those collars were to break or in any way get loose, how would you put on a new one?

A. That would be very apt not to occur. Such a thing might be. If it should occur, the only thing you could do would be to take the rod out and put in another one.

TUESDAY, *April* 17, 1900.

WILLIS B. FRY, recalled on behalf of the defendant.

Mr. WHEATON:

Q. In the stands which have been put in evidence, I have noticed that the trade-mark is cast into the later stands which contain the Diehl brace. Will you please explain the history of the casting of that trade-mark into the legs of the different stands?

A. The stand that was introduced here as the trade-mark stand and which did not contain the Diehl device, was the first
707 stand that had the imprint of the trade-mark cast into the legs, and all stands of family machines that have been received here since have had the trade-mark cast into the leg of the stand in one shape or another; in one size or another.

Q. What difference is there between the castings that were known as the trade-mark stand, and the subsequent castings which had the trade-mark cast into the legs, but which contain the Diehl treadle?

A. The stand that we have been testifying to here as the trade-mark stand had the bearings in the bottom of the leg, arranged in one place to receive the brace, and in another to receive the treadle; whereas, the stands that have been arranged to receive the Diehl device have had the one hole cast in the center part of the bottom of the leg to receive the Diehl device. The cuts in the circular, Exhibit 19, show the one with the two holes cast in the bottom of the leg, one to receive the brace, and the other to receive the treadle bearings. The Diehl treadle could not have been put in those stands as they were cast and shown in Exhibit 19. Subsequent stands contained the trade-mark cast into them. They all bore the trade-

mark in them, but the original stand that I speak of, the first trade-mark stand, is the one which among our employees we have known as the trade-mark stand, that being the first one that was cast with a trade-mark on it. Subsequent stands in which the Diehl treadle was put were not known among the employees as the trade-mark stand.

708 MILTON A. WHEATON, called for the defendant, was sworn and testified as follows:

Mr. KALLOCH:

Q. Mr. Wheaton, you are one of the attorneys for the defendant in this case?

A. I am. I was also one of the attorneys for the defendant in the former case of Cramer *vs.* Fry.

Q. I notice in the reporter's transcript of the testimony in this case, a question by Mr. Miller, addressed to Mr. Cramer, the plaintiff:

"Q. Did you ever have any dealings with the attorneys of the Singer Manufacturing Company regarding this matter?

"A. Yes, sir."

Did you ever have any conversation with Mr. Cramer regarding his patent, after having become an attorney for the Singer Manufacturing Company?

A. I did not. I remember meeting Mr. Cramer in Sonora, and having a conversation with him regarding his patent. I think it was the year 1890. I was engaged in a lawsuit up there, that was all attended to in that year, 1890. That must have been the time when I met him. I was introduced to him by you.

Q. Did you ever advise him that his patent sued upon here, and which he has referred to, was a valid patent, or that it contained the description of any invention or of anything novel?

A. I gave him no advice whatever.

Q. Did you ever advise him that the Singer Manufacturing Company was infringing his patent?

709 A. I never did. I never told Mr. Cramer, or any one else, that I considered the stand of the Singer Company any infringement of his patent, at any time or upon any occasion.

Q. I notice by the transcript that Mr. Cramer testified as follows: "A. Mr. Kalloch introduced me to Mr. Wheaton at the City hotel one time, and he says, 'This is the gentleman whose patent the Singer C[illegible]pany is infringing.'" Did you ever hear me make that statement?

A. I never did.

Cross-examination of M. A. WHEATON.

Mr. MILLER:

Q. What was the occasion, Mr. Wheaton, of you and Mr. Kalloch going to see Mr. Cramer?

A. I did not go to see Mr. Cramer. Mr. Cramer hunted me up.

I think Mr. Kalloch introduced us. Mr. Kalloch was residing at that time in Sonora. Mr. Cramer was anxious for me to go up and see his machine, and came after me, in fact, several times before I did go. Mr. Cramer took me up to his place in a sort of a business wagon. I suppose it was his home—his shop.

Q. Did he show you any machine?

A. I could not tell what he did show me now, from recollection. That is ten years ago. He took me there for the purpose of showing me the machine. He had some machine there. I think it was what he called his patent. The stand was there. I would not be certain whether it had a head on it or not. I think it was a sewing machine. I examined this sewing-machine stand. He explained its mode of operation, and I saw it operate.

Q. For what purpose did he take you up there?

710 A. Well, on account of his having a patent. I had gone up to Sonora for the purpose of trying a case. It was while I was up there, in connection with that case, that Mr. Cramer came to see me. Mr. Kalloch did not go with me to see the machine. There was no one there but Mr. Cramer and myself.

Q. He brought out the machine, and explained its mode of operation to you, I presume?

A. The machine stood there. There was no particular bringing it out. He took me where it was, and showed it to me. I saw it operated. I don't suppose I was there over five minutes. At that time I was not the attorney for the Singer Manufacturing Company. At the time I had no business or professional relations with the Singer Manufacturing Company.

Q. Was anything said at that time with regard to bringing a suit for infringement of this Cramer patent?

A. Nothing more than that he expressed a desire to have some one take his case.

Q. Did he say whom he was going to sue?

A. I could not say.

Q. Did he mention the Singer Manufacturing Company?

A. I could not tell that.

Q. Don't you remember that he took you there for the purpose of showing you the machine with a view to securing your services for bringing a suit?

A. I suppose that that was his object. I could not tell just what was said. He showed me the machine, and I rather threw cold water on it; that is, I did not see anything in it that I thought

711 would justify anything in the shape of litigation. I knew how a sewing machine worked. I had owned sewing machines prior to that time.

Q. Did he say anything to you about the terms of employment?

A. No, sir, it did not get that far along, because I did not speak well of it. I did not encourage the idea of it being worth a lawsuit. Mr. Kalloch, or some one else, had brought me a copy of Mr. Cramer's patent before Mr. Kalloch had become my partner.

Q. Mr. Kalloch brought it to you, with a view of looking into the matter, so as to bring suit, did he not?

A. Yes, sir.

Q. Did Mr. Kalloch say anything about the terms which he had made with Mr. Cramer?

A. No, sir, I don't think he did, because I told him I would not think of bringing a suit on the patent on contingencies. Mr. Kalloch did not show me any draft of a written agreement which he had drawn up for Mr. Cramer to sign. I never saw that draft. I don't think I ever heard of it, until since this trial commenced here.

Q. Was it not stated to you by Mr. Kalloch, substantially, that Mr. Cramer had a patent that he wanted to bring suit on, and that he, Mr. Kalloch, had been talking with him in regard to bringing a suit, and certain terms had been proposed, and he wanted to introduce you to Mr. Cramer, so that you could see the machine and be associated with him, if you saw fit, in the litigation?

A. No, sir, no such conversation ever occurred as that.

712 Q. When Mr. Kalloch introduced Mr. Cramer to you, did he not introduce Mr. Cramer as the gentleman who had the patent on the sewing machine, who wanted a suit brought?

A. He introduced me to Mr. Cramer, I think, the first time. Of course, I understood that that was the object. Mr. Cramer was persistent in desiring to have an interview with me while I was up there. I had seen his patent and understood that he wanted some one to take it on a contingency, and that was something I would not think of doing at all, so I did not care anything about seeing Mr. Cramer up there on that business.

Q. At that time, you were not in the habit of taking cases on a contingency, were you?

A. No, sir.

Q. When Mr. Kalloch introduced you and Mr. Cramer, did he not say to Mr. Cramer, "This is Mr. Wheaton, the gentleman who will, perhaps, be associated with me in your suit." Was not something of that kind said?

A. Oh, no, nothing of that kind was said. He simply introduced him.

The defendant here rested its case.

HERMAN CRAMER, the plaintiff, recalled in rebuttal.

Mr. MILLER:

Q. Do you remember the time the former case of Cramer *vs.* Fry was on trial?

A. I do. Mr. Boone was my attorney at that time. Mr. Boone's office at all the time during the trial of that case was at 206 Sansome street, in this city and county. It was not in the Nucleus building. I am very positive of that.

713 Q. Did you hear Mr. Kierce testify that during the time of the trial of that case he met you in Mr. Boone's office in the Nucleus building in this city, and had a conversation with you?

A. I did. It is not correct. Mr. Boone's office was not in the

Nucleus building at that time. I never made any such statement at any other place such as Mr. Kierce said was made in the Nucleus building.

Q. After the Singer Manufacturing Company got out of that case, and was dismissed therefrom, you believed the case was continued as against Mr. Fry.

A. That is correct.

Q. Did you know at any time during the trial of that case, after that occurrence, that the Singer Manufacturing Company was defending that case for Mr. Fry?

A. No, sir, they never informed me of any fact of that kind. I never had any notice. The case went right straight along against Mr. Fry.

Q. A model has been introduced in evidence here, purporting to be a model of the Bourdin English patent of 1874. Are the treadles mounted there?

A. The treadle upon this model is mounted on a rod that is held by cones and set-screws.

Q. In what respect does the mounting of those treadles on the cones and set-screws differ from the old way of mounting them on cones and set-screws, about which we have had so much testimony here?

A. They do not differ any, just alike.

Q. To what objection would that style of mounting in that model be liable in actual practice?

714 A. There is no alignment to it at all. Besides that, you have to put down one foot, and then the other foot. You do not work it with one foot. In addition to that, it is upon a hinge, like a door, or like the tail-board of a wagon, and is not an oscillating treadle at all. It is wholly impracticable, and a useless contrivance. I do not think there was ever a single one in the United States like it.

Q. Why would it be an impracticable contrivance in actual practice?

A. You could not work that with one foot. I, being lame, could not work it at all.

Q. What would be the other objection to it, resulting from the manner in which the treadle is mounted on the cones and set-screws?

A. It is not oscillating. There is a rope that you have to pull up and down, and you have to keep a steady tension on the one side to work the other side. Just taking one side, you could not work it at all, unless you took your foot from one and dodged it on the other. That is about the only way it could be worked.

Q. Suppose those cones were to wear, and the set-screws to get loose, what would be the result?

A. You would have to put on new cones, if they burst. If that happened, you would have to saw the whole thing apart, and put in a new rod and new cones. If those cones were to wear, and the set-screws got loose, they would flop from side to side. They would slide horizontally on the rod. That style of mounting the treadle

would be liable to the same objection as the old style of cones and set-screws on a rod.

715 Cross-examination of HERMAN CRAMER.

Mr. WHEATON:

Q. Still, that rod upon which are the cones and set-screws, is hung in the vertical cross-brace?

A. The rod, as near as I can see it, is riveted or bolted—riveted, I think, in that brace. I have not seen the specification as to that point, whether it is riveted, or has a nut on the end of it. The rod is in the brace. The treadles are not hung in the legs. They are also suspended in the vertical cross-brace by means of the rod. They are on the rod.

Q. And whatever advantage there is making the connection more rigid, by making it in the vertical cross-brace, instead of the legs, is in that machine, is it not?

A. I do not see any advantage in it.

Q. Do you mean to say there is no advantage in that case?

A. There is no advantage in that case that I can see in placing the rod upon the forward extending of the brace, and putting the whole thing out of line in that direction. I do not see any advantage in that at all.

Q. Is there any advantage, in your judgment, in suspending the treadles by means of the rod mentioned in the vertical cross-brace instead of suspending them by means of the same rod in the legs?

A. It is no advantage; no advantage at all, it is a disadvantage in the way that is constructed.

Q. In that machine, the treadles are suspended by means of a cross-rod that goes from one side of the vertical cross-brace to the other side?

716 A. By means of a cross-rod. They oscillate or hinge on this cross-rod. They are not suspended on this cross-rod.

Q. In your case your treadle is suspended by means of trunnions in the vertical brace?

A. The trunnions I have are bearings. When I made my invention, I did not not hunt up Webster, or any other dictionary, but I hunted up bearings in the vertical cross-brace, and the attorneys called them trunnions.

Q. Between the side of the treadle and the bearings in the vertical brace is a long arm which, in your patent, is called a trunnion?

A. There is a treadle complete, extending into the bearing on the vertical double brace, in or on the vertical double brace.

Q. Between the edge of the web part of your treadle, and the bearings in the vertical brace, is there an arm or not?

A. They might be called arms, yet I call it all one piece. An arm usually is a joint. That is not one solid piece. Then a person might call that an arm. An arm is usually with a joint, one piece all around; so in the patent this was called a bearing; a trunnion, a trunnion bearing. The expression occurs in the first column of

the specifications, near the bottom, "The treadle and its trunnion bearings are wholly independent of the cross-bar D, except its service, as stated, to hold the brace to the legs."

Q. The distinction, or main distinction, between the Bourdin model and yours is, that in your case the bearings are in the
717 lower end of the vertical brace, while in that case they are not?

A. In or on.

Q. Where is that in the patent?

A. In the cross-bar D, that is, in that rod, and not independent of the treadle.

Q. You say you did not know that the Singer Company was defending this suit for Mr. Fry?

A. No, sir.

Q. You knew all of that time that Mr. Fry was simply the agent of the Singer Manufacturing Company and selling machines, did you not?

A. No, sir, I did not even know that. There are a great many sewing-machine people, and they all style themselves agents. Many of them buy their machines, just like a merchant buys flour, or wheat, or anything else. I am one of those agents that has always bought his stock, and I knew nothing but what Mr. Fry was a similar man. I knew nothing, however, to the contrary.

Q. How came you, then, to join the Singer Company with Mr. Fry when you brought that suit?

A. You must ask the attorneys about that, how that happened. I don't know how—he was in their office in the former trial of Cramer and the Singer Company, they were joined together, and I presume that the attorneys thought that it would do that time, too. That is what I imagine. I don't know anything about it. But I heard the attorneys talk that time—that they would take the two in together.

Q. Do you mean to say that you did not know when you brought that suit that Mr. Fry was the agent of the Singer Manufacturing Company?

718 A. When it comes to right knowing, where could I know? Where is my authority for knowing?

Q. The question is, did you know or not?

A. I did not know it.

Q. When you said you sued the company and their agent, who was the agent?

A. It was Mr. Fry.

Q. How long have you known the Singer sewing machines?

A. I presume since 1861 or 1862 or 1863; I don't know anything about their business, how they conduct it.

Q. In the suit you have mentioned, in which the complaint was verified by you, is this statement: "Second.—That the defendant, Willis B. Fry, is the managing agent of said defendant, The Singer Manufacturing Company, in said State and district of California and is a citizen and resident of said State of California, and the northern district thereof." Did you verify and swear that that statement was true, without being aware that it was true?

A. I supposed that he was managing agent, or we could not get at anybody. He was the only one that we could serve any papers on that sold machines here. I went after the seller.

Q. I will read you the first statement: "First.—That the defendant, The Singer Manufacturing Company, is, and at all times herein mentioned was, a corporation organized and existing under the laws of the State of New Jersey, and is, and at all times herein mentioned was, engaged in the business of manufacturing sewing ma-
719 chines and selling the same throughout the United States. That, as a part of its said business, it maintains and conducts, and at all times herein mentioned has maintained and conducted, a branch establishment for selling and trading in sewing machines, at the city and county of San Francisco, State of California, and in the northern district thereof, and in connection with its said business it has and has had at all times a managing agent in said State and district of California, as plaintiff is informed and so believes to be true." And then there is "Second.—That the defendant, Willis B. Fry, is the managing agent of said defendant, The Singer Manufacturing Company, in said State and district of California and is a citizen and resident of said State of California and the northern district thereof." Were you not aware that those statements were true at the time that you swore to the complaint that contained them?

A. As I understand it, they sell machines to Mr. Fry. I could not say whether he bought them or whether there was any contract between them and Mr. Fry. I knew nothing about that, have no way of knowing. The one that conducts a business, whether he buys the machines from the company and pays cash for them, or whether he sells them on a commission, or however he sells them, is considered a managing agent. I understand that he was selling that Singer machine. I should not have sued him if I didn't understand it that way. While I was prosecuting my suit against Fry, I was prosecuting him because of his selling Singer
720 sewing machines alone. I was aiming at Mr. Fry right there and then, and nobody else. The Singer Company ruled themselves out. When I got through with Mr. Fry I would go to New Jersey and sue the Singer Company, and I would have done so, had not that law been passed in 1897, which gave me the right to sue the Singer Company here again. There are other companies that are infringing. I have brought no suits against any person for infringing my patent, except such as were using the Diehl stand. I brought suit against the parties using them; not against the Diehl stand but the parties using them. I knew that there were men going around selling that stand on their machines. What authority they have, how they purchase their machines or how they get them, I know nothing about that, and have no way of knowing. These agents — all liable to me, as I understand the law. I have no way of knowing how the Singer Company do their business, whether they hire agents and pay them a salary here and there, or sell their machines by the hundred or by the thousand to managing agents here and there, as they style them; I have no way of knowing that. I believed Mr. Fry was buying his machines just like I was. I have

no way of positively knowing, only that their agents go around with this Diehl stand all over the country, and that he was handling that machine that infringed upon my patent. How he got them or what arrangements the respective agents had with the company, I have no way of knowing. I never was a Singer agent, and would not be one.

721 Q. Did you believe during all the time that you were prosecuting Mr. Fry, that the Singer Company was manufacturing and selling the Diehl stand?

A. I believed the Singer Company was manufacturing machines. I believe there are various companies manufacturing those machines. I refer to the American Company, and I at one time looked at the circular of the Davis Company, and from the circular I judged they were manufacturing a machine, but they left out a little part of it so as to get clear of being an infringer. And I looked at the Goodrich machine also, and that came pretty close to it. And then the Standard, they came right close to it. And the American is precisely like the Diehl patent. Let me take that back. The wheel is not hung in some of those patents, but the treadle is hung, in the brace. That is, the brace makes the bearings for the treadle. That part I want to correct; that in every other respect, there are quite a number of them who put the bearings in the vertical double brace.

Q. Is it possible that you could have been ignorant of the fact that the Singer Manufacturing Company was defending its agent at the time you were prosecuting Mr. Fry?

A. It is not only possible, but it is the fact.

Q. Why was it in that case that you were willing to go to the expense of prosecuting Mr. Fry, carrying on that lawsuit, and then waiving all damages against him except one dollar, if Mr. Fry was the man you were really after?

A. I will tell you. I was told that Mr. Fry was well off,

722 that he had got an extensive business up north, and that he was responsible for any damages I might get. But why the attorneys make that change I cannot tell, nor did I know it until the suit was over. I cannot tell you why the attorneys did that. I know the attorneys neglected my case, and that is the reason Fry got judgment against me.

Afternoon session.

A. C. BROWN, recalled for plaintiff, in rebuttal.

Mr. MILLER:

Q. I show you this model, purporting to be a model of what is known as the Bourdin sewing machine, and ask you to examine the same, and also the treadle mounting, and see if you understand that mechanism.

A. I see two treadles here mounted on a rod in the old-style way, cones with set-screws in them fastened to the rod, in the regular old way of mounting a treadle on a rod.

Q. You have already testified here before regarding the inefficiency of a treadle mounting in which the treadle was mounted on cones and set-screws on a rod, by reason of the cones wearing and the set-screws getting loose. State whether or not those objections would apply to this form of treadle mounting shown in the model.

A. It is one and the same thing, as I testified here before. They are put on a rod and held in their place by those cones with set-screws in the cones to hold the cones to the rod; just the same thing as what I testified to in the old-style treadle fastened to the rod—the same objection. I never saw anything of this kind in
723 practical use. I don't see anything practical about it. I am using sewing machines every day, and I could not use that at all. I could not use it simply because I use one foot. You may say, why do I not use two feet? I say because I need the other foot on the floor to steady my body. There are a great many that use one foot, and it is also practical to use two. I have been in the sewing-machine business for a number of years, and am familiar with all styles of sewing machines that are being sold and have been sold for a number of years past. I never saw a sewing machine on the market or in use anywhere similar to the one that is exhibited by this model.

Q. You notice there is no rigid pitman rod in this machine?

A. No, sir. There are strings here, or ropes. They are intended to operate the treadles, a sort of pulley arrrangement. That would not be a practical machine. That would be getting out of order. Those ropes would be stretching and have to be adjusted, and it would be a constant source of annoyance all the time. I positively could not use any such treadle as that.

Cross-examination of A. C. BROWN:

The WITNESS: It is common to run a sewing machine with one foot, very much so. I should say that more than half the people run a sewing machine with one foot.

Mr. WHEATON:

Q. Did you not in your testimony before in this case make a strong point upon the fact that in the defendant's machine, his trun-
724 nions and treadle were not hung in the legs, but instead of that, were hung in the double vertical brace?

A. I made a point that the treadle was hung in the brace. I don't know that I used the term "double vertical;" I called it just the brace. In this Bourdin model, the treadles are hung on the rod. You would get the same result if they were hung in the legs. They are hung on the rod.

Q. Suppose instead of that rod a treadle with trunnions had been used that would enter into the holes in which that rod enters in each side of the brace.

A. That would change the whole construction, and I cannot say here just how they could use that. There are two separate treadles

here. I cannot see how they would use that with trunnions or point centers.

Q. Suppose they threw away one treadle and had the trunnions on the other. Would that make any difference?

A. That would change the whole construction. That would be something different from this, and of course I am not in a position to testify as to that. That would be conjecture. I am speaking of them now.

Q. Still the fact remains that in that Bourdin model, the treadles are not suspended in the legs?

A. They are not suspended in the legs. They are suspended on a rod; that is, they are held on a rod. They are fixed here on an extension of the brace, not right in line with the brace. That is different from the other constructions we have been talking about, from the fact that it extends out to the front. It is not right in vertical line.

725 Q. What is the reason that in an arrangement in which the treadle was hung on a cross-rod, with conical collars and set-screws, it would not be the equivalent of other methods of hanging the treadle, considering that in both instances the treadle was operated by oscillation, and run the band wheel.

A. The objections that I see here, as far as the construction of it is concerned, is that it is hung on the rod here, and it is held in place by those cones, and that is an objection. The cones are an objection on the rod.

Q. You understand the method in common use of suspending the treadles on the rod by conical collars and set-screws, and you also understand the method of suspending a treadle by means of trunnions with bearings at the ends of the trunnions?

A. Yes, sir.

Q. Why is not one of those arrangements the mechanical equivalent of the other, so long as in both arrangements the treadle was oscillated and operated the band wheel properly?

A. Of course they will both run the sewing machine that they are intended to run, but one has a great advantage over the other.

Q. In that respect, both produce the same result, do they not, that is, in both arrangements the treadle is hung so as to oscillate it and run the machine?

A. That is what I said, that they both run the machine.

Q. Then what is the reason that one is not the mechanical equivalent of the other, if there is any reason?

A. The question is, What is a mechanical equivalent? If
726 the mechanical equivalent is whether they both run the machine, and we are talking about sewing machines, as they both run a sewing machine, they would be mechanical equivalents. But I am not prepared to say that that is a mechanical equivalent.

Q. Well, what do you think about it? A mechanical equivalent is a device which may be substituted for another, and which will perform the same work by operating in substantially the same manner.

A. They both produce the same result. As I say, they both run

the sewing machine. But one runs it a great deal easier than the other. There is a great difference between mechanical devices. One may be very far superior to the other, and at the same time both produce the same results.

Q. Suppose that the end of the trunnions were not on knife-edges, but were in a round-journaled opening. Would that make any difference?

A. The result would be the same. They would both perform the same thing. They would both run.

Q. And it would operate in the same manner, would it not by oscillating?

A. It would not operate in the same manner, because one might operate very nicely, and the other might not. I cannot answer that question in any other way than that they both produce the result of running the machine.

Q. And they both operate in the same way, that is, by oscillation?

A. Yes, sir.

Q. And if one runs easier than the other, that is owing to the style of bearings, is it not?

727 A. Not always. It may be the style of construction. The style of construction would have more to do with it than the style of bearing, very likely.

Q. In the case of the Bourdin model, do you think there is any advantage gained in that by having the rod suspended in the brace instead of having it suspended in the legs?

A. The result here would be just the same, from the fact that it is a rod. The principal objection to that, as far as its bearings are concerned, is in those cones, the cones on that rod. That is not what we are talking about. I do not consider that a practical thing at all. I am speaking of its wearing parts there now.

Q. But you do think that the operation and effect would be just the same in all respects if that rod was suspended in the legs as if it were suspended in the brace?

A. Just the same. It would not make any difference.

Q. Then what is the reason in the old-style machines that the effect would not be the same, whether that rod which contained the conical collars and set-screws was suspended in the legs as when suspended in the brace?

A. I don't think it would make any difference, no particular difference.

Q. Then the fact as to whether the device on which the treadle operates is placed in the legs or in the brace makes no difference?

A. It makes a difference what kind of a mechanical device you use there, and how it is used. One is placed in the brace, and this is placed on the rod. That does make a difference.

728 Q. I am speaking of the same mechanical device, the rod with the collars and set-screws, the style that was in common use in so many machines. In your opinion, does it make any difference with these machines whether that rod is suspended in the brace or suspended in the legs?

A. Well, it would make some difference, but as far as the bear-

ings are concerned, there would not be any difference. But there would be a difference that it would be more likely to keep in proper alignment, that is, the rod itself, in proper angle to the drive-wheel by being suspended in the brace than if suspended in the legs.

Q. Why does not that same difference apply to the Bourdin model, that there was a difference made by suspending the rod to the vertical brace, as compared with suspending it in the legs?

A. It would not make any difference whether this was on the proper right angle with the drive-wheel or not, because there is a string or rope here, and it is not like as if it was a stationary connecting rod or pitman, it is usually called in sewing machines, so that that would not make any difference in this case.

Q. Would it make any difference in these machines that have been shown here in court where the pitman operates on a sort of ball joint in which it may act without being vertical line, whether it was hung in the brace or hung in the legs?

A. It is less liable to get out of line or right angles, the proper right angle with the wheel, because it is suspended in one solid casting.

729 Q. You are aware that the method of suspending the two bearings of shafts oscillating and revolving was a common method in use more than thirty years ago, are you not?

A. Yes, sir.

Q. Mechanics at that time understood all the advantages that there were in having two bearings of a rotating or oscillating shaft placed on the same casting, were they not?

A. I don't know whether they understood all about it or not. There were inventions going on all the time.

Q. Has there been any difference in the result in which the two bearings of rotating and oscillating shafts were fixed in the same casting, thirty years ago, or in the same thing as done now?

A. If it was identically the same thing, there would not be any difference. But here have been different devices, and the devices that are used on sewing machines at the present day are a great advantage over the ones which were used twenty-five or thirty years ago, or even twenty years ago.

Q. So far as Mr. Cramer's method of putting the treadle bearings in the single casting is concerned, do you know as a matter of fact, that that does make them any stronger or more rigid, or more liable to keep in line?

A. Of course, it would be more liable to keep in line, because it is in one solid piece, one solid casting.

Q. Why do you say "of course"? Have you ever made any sewing machines so as to know?

730 A. I have used sewing machines, and I know the objections there have been to old methods, and I know the objections which have been overcome by the new, which we are now talking about. I know that from actual experience, that it is better. It keeps in line and keeps in proper adjustment.

Q. Have you ever used a Cramer machine in which the block and cushions were removed entirely?

A. I have never used a Cramer machine at all. The only thing I have used is a Singer machine, which has that device that I am talking about, a treadle hung in the brace. I have used that a great deal. That works well. In that machine there are no knife-edges.

L. W. SEELY, recalled for the plaintiff, in rebuttal.

Mr. MILLER:

Q. Mr. Seely, do you remember the occasion of the trial of the former case of Cramer *vs.* Fry that has been mentioned here?

A. Yes, sir; I was a witness in that case. The attorneys for Mr. Cramer in that case were Mr. Hanlon, Mr. Boone, and Mr. Nougues. Mr. Hanlon took no active part in the case, so far as the trial was concerned. I had my consultations in that case with Mr. Boone and Mr. Nougues.

Q. Where was Mr. Boone's office during the trial of that case?

A. On the east side of Sansome street, between California and Pine. It was not the Nucleus building. I knew the Nucleus building. Mr. Nougues' office was about 411 California street, between Sansome and Montgomery. I was in consultation with him
731 sometimes, also. I was in consultation with each of them; with each one at his own office, and with both of them in the offices of each other. The office of one was on Sansome street and the other was on California street. After the trial Mr. Boone formed a partnership with Mr. Nougues, and they commenced their partnership with offices in the Nucleus building. But that was after this trial of Cramer *vs.* Fry. It was not during the time of the trial.

Q. Please look at this model here, which purports to be a model of the Bourdin patent, and state whether or not the objection you have heretofore specified in your testimony as inherent in a treadle mounting consisting of cones and set-screws would apply to a construction of this kind.

A. Inasmuch as the treadles are mounted upon a rod, or rather, upon cones upon a rod, they are subject to all the disadvantages which I have pointed out before as necessarily attaching to such a construction.

Q. Do you find any disadvantage also in the form of the treadles and the connection with the sewing-machine mechanism by means of cords?

A. Yes, sir. The invention in this case of Bourdin did not apply to the treadles. It was a means of driving the shaft above the pedals.

Q. What are those means?

A. On the shaft are two separate oscillating sleeves with a clutch inside of each. Therefore, in order to drive them alternately, and always revolve the shaft in the same direction, it is necessary to use two shafts upon the rod, and to connect those treadles by a flexible cord or band to these two sleeves. In operating the ma-
732 chine, in depressing one treadle the other one is pulled up, and it is necessary not only to operate the sleeve as each treadle is depressed, but also to pull up the treadle, the connection

between them being a flexible one. This device requires two treadles.

Q. Those sleeves on the driving shaft are so arranged that one of them moves in one direction and the other moves in the other direction, alternately?

A. Yes, sir. They are pulled back and forth on the shaft, but there is a clutch in each one that alternately takes hold and lets go. That gives a continuous motion to the shaft, produced by the alternating oscillations of two treadles.

Q. You find that mechanism described in the Bourdin patent?

A. Yes, sir. I do not find in the Bourdin patent any description of the treadle mountings at all. The treadles are not described in the patent. I find in the Bourdin patent an improved clutch mechanism for operating a shaft. I find no description of the treadle mountings in the patent; no description whatever. I presume that form of treadle mounting was old at that time. The patent contains no description whatever of the treadle. All I find there is a figure or drawing, in that regard. There are two treadles. There is a single-pointed cone and set-screw outside of each treadle, and another cone and set-screw between the two treadles, forming a bearing for them both, upon the inside. But they are the same cones and the same set-screws, secured to the rod in the same way as has been used for many years in sewing machines.

733 Cross-examination of L. W. SEELY.

Mr. WHEATON:

Q. In that Bourdin model, do you find any advantage whatever on account of placing the rod that carries the cones and set-screws in the vertical brace instead of placing it in the legs of the machine?

A. No, sir. I think there is no advantage whatever. The disadvantages of this kind of treadle mounting grow out of the loose cones and set-screws on the rod, and I think those disadvantages would attach, no matter where the rod was placed, whether in the brace or in the legs.

Q. Then when similar rods were placed in sewing machines in the United States, with the cone collars and set-screw, as has been described, was there any advantage in placing them in the legs instead of the cross-brace?

A. They never were placed in the cross-brace, to my knowledge.

Q. I want to know if there was any disadvantage in not placing them in the cross-brace?

A. I do not see any; no.

Q. Then practically the same thing, if that had been placed in the cross-brace, would result as was the case when they were placed in the web of the legs of the machine, and the cross-brace bolted solid to those legs?

A. Yes, sir. There would be some disadvantages in both cases.

Q. The mere fact of changing it from the legs to the cross-brace would not furnish any advantage whatever, would it?

734 A. No, sir. The change of that rod with its cones and set-screws from the legs to the cross-brace would not remove the disadvantages. Those grow out of the use of the cones and set-screws on a rod, no matter where it is placed. The tendency of the cones and cones and set-screws to get loose, and the tendency of the rod to bend are equally present, whether that rod is in the legs or in the cross-brace.

Mr. MILLER: That is our case.

Mr. WHEATON: That closes the testimony, so far as the defendant is concerned.

WEDNESDAY, *April* 18, 1900.

Mr. OFFIELD: If the court please, I desire to call the attention of the court to the proposition which we now present to your honor, which is practically a renewal of the motion that was made at the close of the plaintiff's case, namely, that under the law and the facts as now presented, the jury should be instructed to return a verdict for the defendant.

(*Argument.*)

THURSDAY, *April* 19, 1900.

Mr. WHEATON: If the court please, the argument that was made yesterday seems to have been made without a formal motion having been made. To cure that, I now move the court to instruct the jury to find a verdict for the defendant, upon the ground that no infringement whatever has been shown.

The COURT: I regret exceedingly that I have not had an opportunity to examine more fully than I have the question of instruct-
735 ing the jury to find for the defendant, because, as I have already indicated to counsel, I desire that the trial of this case shall dispose of the controversy between these parties with respect to this subject-matter; and I do not desire to pass over any question without very carefully and very fully considering all the matters involved, so that, whatever may happen hereafter, it may distinctly appear that the court has considered the question in every possible phase. I am not prepared to say that I have examined the question with the fullness that I would like. I have not been able to read all the cases cited by counsel; indeed, I have read but very few of them. But I think I am ready to dispose of the question involved.

This motion to instruct the jury to find for the defendant is based upon the force and effect that it is claimed should be given to the judgment entered in the case of Herman Cramer, plaintiff, *vs.* Willis B. Fry, on April 12, 1895.

The original declaration of complaint in that case was filed in this court on May 31, 1893, and charged the defendant, Singer Manufacturing Company, a corporation, and Willis B. Fry as the managing agent of said corporation in the northern district of California, with having infringed complainant's letters patent No. 271,426, and having wrongfully made, used, and sold sewing ma-

chines containing and embracing the invention described, claimed and patented in said letters patent.

A separate demurrer was filed in that case by the Singer Manufacturing Company, alleging and setting up as a ground of
736 demurrer that the court had no jurisdiction over the person of the defendant Singer Manufacturing Company, for the reason that said corporation was created under the laws of the State of New Jersey, and no service had been made upon that corporation as required by law. This demurrer was sustained by the court on November 27, 1893, and the court entered an order of dismissal. The judgment on this dismissal provided expressly that it was without prejudice to the right of complainant to commence another suit for the same cause of action. Whereupon the complainant filed an amended declaration against Willis B. Fry, as the sole and only defendant, charging the said Fry individually with the infringement of said letters patent. To this declaration the defendant filed an amended answer denying the allegations of the declaration and setting up certain affirmative defenses, among others, that the sewing-machine treadles which the Singer Manufacturing Company had sold through the defendant, as an employee of said corporation, and on account of the sale of which the action had been commenced against the defendant, were constructed under and according to the specifications and claims of certain letters patent numbered 306,469, bearing date October 14, 1884, and issued to Philip Diehl, assignor of said corporation, said Singer Manufacturing Company. The case was tried in April, 1895, and after the introduction of evidence in the case, the defendant moved the court to instruct the jury to find for the defendant. This motion was granted, on the ground of non-infringement, the court rendering an opinion at the time
737 explaining the reasons why, in its judgment, there was no infringement of the plaintiff's patent by reason of the mechanism known and described as the mechanism of the Diehl machine.

The present action was commenced in October, 1896, against the Singer Manufacturing Company alone. In its answer it denies generally the allegations of the complaint, and sets up as a special defense the judgment in the case against Willis B. Fry, and the defense in that case that the infringement charged was for the making and selling of sewing machines containing treadles and treadle mechanism constructed under the Diehl patent. On the first trial of this case this judgment was offered in evidence, was admitted by the court, and deemed by the court to be a bar to the action.

Upon writ of error to the court of appeals, the judgment was reversed, and the case remanded for a new trial (93 Fed. 636), on the ground that, to enable a party not of record nor in privity with a party of record to avail himself of a judgment as an estoppel, on the ground that he has defended the action resulting in the judgment, he must not only have defended that action, but must have done so openly, to the knowledge of the opposite party, and for the defense of his own interests; that he employed the attorneys of the

defendant and paid all the expenses of the defense will not avail him where this is not known to the complainant.

It appears that the record in the case on the first trial did not disclose the fact that the complainant in the case knew that the
738 former case was defended by the Singer Manufacturing Company.

This judgment in the case of Cramer *vs.* Fry has again been introduced in evidence in the present case, and is again relied upon by defendant as a bar to the present action, first, upon the ground that the question of infringement charged in the complaint is *res adjudicata*, and that this court has determined that the mechanism described in the Diehl patent in the former case is not an infringement of the complainant's patent; and second, that if the question in controversy is not *res adjudicata*, it is still the duty of the court to follow the decision of Judge McKenna in the first case, and to instruct the jury that there is no infringement.

The original case, as well as the present case, was an action of trespass. In the first case the action was against the Singer Manufacturing Company and Willis B. Fry. The Singer Manufacturing Company, upon its own motion, was dismissed from the court, but with the express reservation that it was without prejudice to the right of the complainant to commence another suit for the same cause of action. It is difficult to see how, under this state of the case, the former judgment can be deemed as disposing of the present controversy as *res adjudicata*, unless it appears from the evidence in this case that plaintiff knew in the former case that the Singer Manufacturing Company was the real defendant in the case. This last question is, of course, for the jury to determine, and not for the court. It is a question of fact that belongs exclusively to their jurisdiction.

739 This appears to be the position in which the controversy has been placed by the court of appeals. It had before it the other phase of the question of *res adjudicata*, which has been presented to the court in this case, and the court of appeals passed over that particular controversy, and placed its decision and the reversal of the judgment upon the proposition that it did not appear in that case that the plaintiff knew that The Singer Manufacturing Company was the real defendant in the case. I do not see, therefore, how I can properly change the issue, and dispose of the case upon one that was before the court of appeals but not decided. It seems to me to be the duty of this court to take the case as returned by the court of appeals and correct the error that was committed by this court in the former trial, and have the matter presented to the jury, thus disposing of the question of the former judgment in the method pointed out by the decision of the court of appeals; that is to say, not pointed out in express language, but by the method in which it disposed of the record as presented to the court of appeals. Therefore, upon the ground that this controversy between the plaintiff and defendant is *res adjudicata*, as a legal proposition, it is the opinion of the court that this motion must be denied, and the question submitted to the jury, as a question of fact, with such evidence

as has been introduced in this case as to the knowledge of the plaintiff that the present defendant was his real antagonist in the former case.

There remains to be considered the other ground of the
740 motion to instruct the jury to find for the defendant, namely, that Judge McKenna, upon the trial of the other case, so instructed the jury with respect to the controversy as to the infringement of complainant's patent by the Diehl machine.

I appreciate the force of the views expressed by the Supreme Court with respect to the duty of courts to follow the decisions of other courts of co-ordinate jurisdiction, and particularly to follow the law as it has been declared by the same court. I feel also the force of the suggestion that in this case this court should follow the decision of Judge McKenna, he appearing to have considered the question very carefully, and his acknowledged ability giving great weight to his opinion; but, on the other hand, this court is charged with a duty of its own. It is incumbent upon this court to dispose of every case before it as it understands the questions presented, and as it understands the law. I bow with respectful consideration to the decisions of all my associate judges, and particularly to those who occupy higher judicial positions, but in this case I am impressed with the belief that Judge McKenna's decision was placed upon a point that did not give full effect to the entire claim in controversy in this case. Judge McKenna in that case held that this was a narrow patent. I concur with his views upon that proposition. But he also held that the patent was restricted to the specific elements enumerated, excluding equivalents, and he pointed out certain specifications as containing the elements that were so restricted. In support of his views, he quoted from cases where that view seemed to have been established, but, upon examining
741 these cases, it will be found that the court there held that it the specific devices enumerated in the claims and not in the specifications, that were so restricted. It is a well-known law of patents that the measure of the inventor is the description of what is claimed; that is to say, what is set forth in the claims. In this case, Judge McKenna considered that this patent of the complainant was a narrow one, and that the rule of equivalents did not obtain in its construction.

The question as to whether or not there is an infringement of a patent is generally a question of fact to be submitted to the jury, unless the court, in its construction of the patent, can dispose of all the questions in controversy. In other words, it is the duty of the court to construe the patent and determine the scope and character of the invention. If, in so construing a patent, it eliminates all the questions in controversy, then, of course, it disposes of the case upon questions of law.

Judge McKenna, in his decision, disposes of the case upon what he considered questions of law, namely, that the patent was of such restricted construction that the law of equivalents did not obtain. I am constrained to say that I am not in accord with Judge McKenna upon that proposition, for the reason that the construction he places

upon this patent, and to which he directs attention, is, as I said before, those matters that appear in the specifications more particularly than in the claims. He reads from the file-wrapper, showing the progress of this case through the Patent Office, and the changes that were made in the specifications as well as in the claims,
742 and he points out certain provisions of the specifications, and calls attention to its language, saying, "Mark the language here contained." The language referred to is the language of the specification. It is true, the specifications are somewhat obscure. That patentee in his specification said:

"My invention relates to improvements in the bearings of sewing-machine treadles; and it has for its object to provide means, first, to keep the treadle bearings rigidly in line and at a fixed distance apart to avoid friction, and, second, to make its movements in use noiseless. To this end, my invention consists in the construction and combination of parts hereinafter fully described and claimed, reference being had to the accompanying drawings."

And, after having described the bearings of this treadle, "I am aware that sewing-machine treadles have before been provided with V-shaped bearings, and I do not claim the same as my invention."

The difficulty I find with respect to this decision is, that learned judge confines the patentee to the specific elements described in the specifications, although the applicant for the patent disclaims a part of those specific elements. Judge McKenna says in effect, "You are confined to the specific elements you have described in your specification." He does that, notwithstanding in the specification in question, the patentee disclaims a part of the very element that is therein contained. He says, "I am aware that sewing-machine treadles have before been provided with V-shaped bearings, and I do not claim the same as my invention."

743 It seems to me that, under such a specification and such a disclaimer, we must look elsewhere for the specific patent, the specific invention, and we look for it in the very place that the law says we must look for it, namely, in the claims. In all the cases the courts say, "You must look to the claim and see what that says; there you will find the invention and there you will find the restriction." I find that claim 1 provides as follows: "What I claim and wish to secure by letters patent is: The vertical double brace joining the legs of the two ends of a sewing machine, provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings, substantially as specified."

It seems to me that to hold that there is no law of equivalents to be applied to the bearings of this machine, is to give it a restriction, and to limit its force and effect beyond what has been the rule in patent cases.

Judge McKenna relies upon the case of Knapp *vs.* Morse. This case had relation to the framework of dress forms, used by dressmakers, and the question under consideration in that case was as to the construction of the second claim, and that claim was, "In combination with the standard *a* and ribs *c*, the double brace c^2, the

sliding blocks f^1 and f^2, and rests h^1 and h^2, substantially as and for the purposes set forth."

This was a claim of the Hall patent. The court said:

"If the Hall patent was a valid pioneer invention, the doctrine of equivalents might be invoked with regard to the sliding
744 blocks and rest, and thus a different question would be raised; but, being confined to the specific elements enumerated by letters of reference, it is neither entitled to a broad construction, nor can any doctrine of equivalents be invoked so as to make the appellants' device an infringement of the second claim in controversy. Our conclusion, therefore, is that the Hall patent is invalid, and further, if it could be sustained at all, it would have to be in the most restricted form and, thus restricted, it is not infringed by the appellants. It follows, therefore, that in each case the judgment of the courts below must be reversed."

As I said before, that decision has reference to the specific claim that is pointed out by letters of reference, and where on the trial they wanted an equivalent for an element that is described in the claim by letters of reference, it was refused. Of course, that must be the law, but it does not seem to me to be applicable in this case.

So in the case of Wright *vs.* Yuengling, also cited by Judge McKenna. That was a case with respect to a plow. The court said:

"Now, while this semicircular connecting piece may be an immaterial feature of the Wright invention, and the purpose for which it is employed accomplished, though less perfectly, by the extension of the guiding cylinder in the manner indicated in defendant's device, yet the patentee, having described it in the specification, and declared it to be an essential feature of his invention, and having made it an element of these two claims, it is not now at liberty to say that it is immaterial, or that a device which
745 dispenses with it is an infringement though it accomplish the same purpose in, perhaps, an equally effective manner."

Judge McKenna also quotes from the case of Coupe *vs.* Royer, where the court said:

"The principle of construction which we think applicable to plaintiff's patent is, that such construction must be in conformity with the self-imposed limitations which are contained in the claims. Such claims are the measure of their right to relief."

The court goes on to say in that case: "When a claim is so explicit, the courts cannot alter or enlarge it," and so forth.

As I said before, I am entirely in accord with this principle laid down in the cases cited by Judge McKenna, and think that it would be applicable to the case where the matters are set forth in the claim. But in this case, the specific element, the bearings, is in the specification, except in the reference in the first claim, to the trunnions, but, in view of the previous disclaimer as to the V-shaped bearings of the trunnions, I think the law of equivalents may be invoked in this case, and as the question of equivalents is a question for the jury, I propose to submit that question to the jury, with proper instructions. The motion is, therefore, denied.

Exception Eleventh.

To which ruling of the court the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

746 The case was then argued to the jury by the respective counsel and on Friday afternoon, April 20th, the court proceeded to charge the jury.

Exception Twelve.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"In this case you are instructed that under the construction of the patent as given by the court, no infringement exists, and your verdict must be for the defendant;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Thirteen.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instructions:

"A witness false in one part of his testimony is to be distrusted in others;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

747 *Exception Fourteen.*

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"Where an anticipating fact prior to the date of a patent is proved beyond reasonable doubt, the burden is shifted to the plaintiff to prove, by convincing preponderance of evidence, that his invention was made still earlier than that fact occurred; and if the plaintiff does not introduce enough evidence to strongly outweigh whatever evidence is introduced to the contrary, the patent must be held to be void for want of novelty;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel,

then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Fifteen.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The jury are instructed that in determining what in reality and in fact was the invention of the plaintiff, they may refer to the various communications and statements of the plaintiff Cramer and his attorneys in the Patent Office and declarations there
748 made, and the rulings of the Patent Office thereon, prior to the obtaining of his patent; and that if they believe from such statements and disclosures, commonly called the 'file-wrapper and contents of the patent,' that the invention of Cramer consisted as a matter of fact in providing the two lower ends of the vertical cross-brace of a sewing machine with holes formed into vertical loops to permit the entrance of the treadle, such holes being so constructed as to serve as bearings and having combined therewith a treadle provided with trunnions fitted to oscillate in said bearings substantially as specified in the patent, and if the jury should find that the vertical double brace joining the legs of the two ends of the sewing machine of defendant is not provided with holes through its lower extremities to serve as bearings and is not combined with a treadle provided with trunnions fitted to oscillate in said holes and bearings, substantially as specified by the first claim of the Cramer patent, then the jury will find for the defendant;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Sixteen.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

749 "The jury are instructed that to constitute a pioneer patent or invention, the mechanical functions performed by the patented device must be, as a whole, entirely new, a wholly novel device, or one of such novelty and importance as to mark a distinct step in the progress of the art, as distinguished from a mere improvement or perfection of what had gone before;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Seventeen.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The jury are instructed that the first claim of the Cramer patent has reference only to the vertical double brace joining the legs of the two ends of a sewing machine, and that if the jury believe from the evidence that the treadle of the defendant's sewing machine is hung in the cross-bar of said machine and not in the vertical double brace, the jury will find for the defendant;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

750 *Exception Eighteen.*

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The law requires that the patentee's specification should set forth the principle and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions and shall particularly point out the part, improvement, or combination which he claims as his own invention or discovery. We find here no authority to grant a patent for a 'principle' or a 'mode of operation,' or an idea, or any other abstraction. A machine is a concrete thing, consisting of parts, or of certain devices and combination of devices. The principle of a machine is properly defined to be 'its mode of operation,' or that peculiar combination of devices which distinguishes it from other machines. A machine is not a principle or an idea. The use of ill-defined abstract phraseology is the frequent source of error. It requires no great ingenuity to mystify a subject by the use of abstract terms of indefinite or equivocal meaning. Because the law requires a patentee to explain the mode of operation of his peculiar machine, which distinguishes it from others, it does not authorize a patent for a 'mode of operation as exhibited in a machine.' Much less can any inference be drawn from the statute, that an inventor who has made an improvement
751 in a machine, and thus effects the desired result in a better or cheaper manner than before, can include all previous inventions, and have a claim to the whole art, discovery, or machine which he has improved. All others have an equal right to make improved machines, provided they do not embody the same, or substantially the same devices, or combination of devices, which constitute the peculiar characteristics of the previous invention;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Nineteen.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction.

"The second claim of the patent covers a combination of mechanical devices which include the cushion, F, and the block *f*. It is admitted that the defendant has not used either the cushion F or the block *f*. You must, therefore, eliminate from your consideration the cushion F and the block *f*. In doing this you should consider the plaintiff's patent just as though it never had the cushion F or the block *f* mentioned in it;" which said instruction the court refused to give as requested.

752 To which said refusal of the court the defendant, by its counsel then and there duly excepted, and hereby tenders this, its bill of exceptions for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Twenty.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"In using the plaintiff's model, which is introduced in evidence as a machine that contains the plaintiff's patented invention, you must look at the model just as it would be if there was no cushion F or block *f* contained in it. You must eliminate the cushion F and block *f* from the model entirely and compare with the defendant's machine only what is left of said model when the said cushion and block are removed from it," which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Twenty-one.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

753 "When said cushion F and block *f* are removed from said model, there will not remain any devices that are shown in the plaintiff's patent for preventing the trunnions from raising out of their bearings or that will prevent the treadle and its trunnions from moving endwise until the end of either one or the other of its trun-ions comes in contact with the iron web of the

legs;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Twenty-two.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"In considering the plaintiff's patent and model, therefore, you must read and look upon them just as though the patent did not contain a word about the cushion F or block *f*, and just as though the model did not have in it either the said cushion or the said block;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Twenty-three.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court
754 to give to the jury the following instruction:

"A claim for a combination does not cover or protect any of the mechanical devices which are contained in such combination by themselves. Claiming two or more mechanical elements as a combination in law admits that each and every one of the mechanical elements so combined is old and constitutes no part of the patented invention;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Twenty-four.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"It is admitted by the plaintiff that there has not been any infringement by the defendant of the second claim of the patent. Damages are now claimed for an alleged infringement of the first claim of the patent only. The jury, therefore, should not pay any attention to the second claim of the patent, but should decide the case just as though that claim were not in the patent at all;" which said instruction the court refused to give as requested.

755 To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Twenty-five.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The plaintiff has not introduced any evidence tending to prove any damages that have resulted to him from any infringement of said first claim alone. If, therefore, you should find that said first claim had been infringed by the defendant, the damages assessed should be nominal, that is, one dollar and no more;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Twenty-six.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"In order to infringe the first claim of the plaintiff's pat-
756 ent, the defendants must have used the combination of mechanical devices that are covered therein. It is no infringement of the claim to use a different combination, even though such different combination of mechanical devices should produce exactly the same result as is produced by the combination of devices that is covered by said claim one of the plaintiff's patent;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Twenty-seven.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"It is not only necessary to an infringement that the arrangement which infringes should perform the same service, or produce the same effect, but, it must be done in substantially the same way;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Twenty-eight.

Prior to said charge and to the argument of counsel, the
757 counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The plaintiff's trunnions are cast solid with the treadle and oscillate with it. No other devices would constitute any mechanical equivalent of those trunnions unless they operated in substantially the same way. Stationary devices which did not oscillate at all would not be devices that operated in substantially the same way as the trunnions operate. If, therefore, the screw-bolts with their point centers, which were used by the defendant, were stationary and did not oscillate, the jury should not consider them as the mechanical equivalent of the trunnions of the plaintiff's patent;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Twenty-nine.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"If the jury believe from the evidence that the screw-bolts with their point centers, which were used by the defendants, did not operate in substantially the same way as that in which the trunnions of the plaintiff's patent operated, their verdict should be for the defendant;" which said instruction the court refused to give as requested.

758 To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Thirty.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The oscillating trunnions of the plaintiff's patent are devices which are placed in the patent between the treadle proper and the bearings which support the treadle. If the testimony shows that the screw-bolts upon which the treadle is supported in the defendant's machines are not placed between the treadle and the bearings on which it oscillates, and also believe that the said screw-bolts do not oscillate, then the jury should consider that the said screw-bolts are not the mechanical equivalents of the said trunnions, and their verdict should be for the defendant;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Thirty-one.

Prior to said charge and to the argument of counsel, the
759 counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"If one of the devices of the combination of said claim should be omitted and another device should be substituted therefor, and the operation of the substituted device should have an operation that was so far different from the operation of the device for which it was substituted as to give the entire combination a new and different action which was not performed by the combination of said first claim, then it would not continue to be the same combination as that covered by said first claim, but it would be a different combination and would not be any infringement of said first claim even though it should produce the same ultimate result of providing bearings which would support the treadle and in which the treadle would be made to oscillate;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Thirty-two.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The patentee declares in his specification that his invention 'consists in the construction and combination of parts' that are fully described and claimed in the specifications, including
760 the drawings which are a part of the specifications. The invention, therefore, includes not only the combination of parts but the construction of those parts as well;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Thirty-three.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The particular construction which is specified in said first claim

of the plaintiff's patent is a part of the claim and no combination of mechanical devices that has been used by the defendant would constitute any infringement of said first claim unless it contained not only substantially the same mechanical parts, but also substantially the same construction of those parts as that which is specified in said first claim;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

761 *Exception Thirty-four.*

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The following are matters of construction which are particularly specified in said first claim, viz: There must be holes through the lower extremities of the double vertical brace, and those holes must serve as bearings. Unless the defendants have used a double vertical brace which had holes through its lower extremities which were adapted to serve as bearings, it has not infringed the plaintiff's patent and the verdict should be for the defendant;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Thirty-five.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"A further specific construction which is called for by said first claim is a treadle provided with trunnions which are fitted to oscillate in the holes that are through the lower extremities of
762 the vertical brace. Unless the defendant has used treadles which were provided with trunnions or some equivalent thereof, which trunnions or equivalents thereof were fitted to oscillate in holes that were in the lower extremities of the vertical brace, it has not infringed said first claim, and your verdict should be for the defendant upon the ground of non-infringement;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Thirty-six.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"As a part of its testimony in this case, the defendant has introduced in evidence a United States patent which was granted to it, as the assignee of Philip Diehl. This patent bears date October 14th, 1884, is numbered 306,469, and was granted for alleged new and useful improvements in sewing-machine stands and treadles. The evidence shows that the stands and treadles which the defendant has made and which are claimed to infringe the plaintiff's patent were made under and in accordance with the specifications and claims of this patent which is owned by the defendant;" which said instruction the court refused to give as requested.

763 To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Thirty-seven.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The jury are instructed that the defendant's patent is *prima facie* evidence that the alleged inventions which are covered by its claims were new and useful when they were made by said Philip Diehl, the plaintiff's assignor, and in this respect the defendant's patent is *prima facie* evidence for the defendant to the same extent as the plaintiff's patent is *prima facie* evidence for the plaintiff;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Thirty-eight.

Prior to the charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The jury should remember that the plaintiff's patent does
764 not cover or protect any invention except what is described in the patent and covered by its claims. It does not give to the plaintiff any equivalents of his invention. A patent that is of a pioneer character may cover mechanical equivalents of the devices that are used in making up the combinations of its claims, but in such case the patent cannot cover mechanical equivalents, excepting only so far as they fall within the invention that is covered by the patent. If the introduction of mechanical equivalents do not change

the character of the combination covered by the claim, the combination still remains the same, and is protected by the patent. But if the mechanical equivalents which are introduced change the character of the combination so that it is not the same combination that was made by the patentee, then the combination is no longer within the invention that is covered by the patent, and its use will not constitute any infringement of the patent. In no case whatever can a patent be extended so as to cover or protect in the patentee any equivalent of his invention. A mechanical equivalent that falls within the invention patented is one thing, but another invention which may be called an equivalent of the invention patented is another thing entirely, and the patent cannot be made to reach or cover it;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

765 *Exception Thirty-nine.*

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the followin- instruction:

"The sewing-machine stands which have been made by the defendant, and which are claimed to infringe the plaintiff's patent, have been introduced in evidence and there is no dispute as to how they are constructed and used. Both sides to this case agree upon what the defendant has made and used and sold, and both parties agree that the treadles made and used and sold by the defendants are those which are described in the said Diehl patent;" which said instruction the court refused to give as requested.

To which said refusal of the court, the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Forty.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"As to whether the sewing-machine stands which have been made, used and sold by the defendant are covered by the claims of the Diehl patent or not is an important question in the decision of this case. Because in so far as the claims of the said Diehl patent
766 cover the construction or combination of mechanical devices shown therein, the said patent is *prima facie* evidence that such construction and combinations do not infringe upon any prior patent. The construction and combinations that are covered by the claims of the said Diehl patent constitute a decision of the Patent Office that the same were, when the patent was granted, both new

and useful, and also that said Philip Diehl was the first and original inventor thereof;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Forty-one.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"If you find that Philip Diehl was the first and original inventor of the combinations of mechanical devices which are covered by the several claims of said Diehl patent, you must consider that the Diehl patent is *prima facie* evidence that the same were never invented by any prior patentee, whether such prior patentee was Herman Cramer or any one else;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its
767 bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Forty-two.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"No two different independent inventors can be the first inventor of the same invention. Unless they both make the same invention at the same time, one of them must make it before the other does. The said Diehl patent being later in date than the plaintiff's patent is evidence which tends to prove that the inventions covered by it were made after the plaintiff, Cramer, had completed the inventions which are described in or covered by his patent. Unless, therefore, the construction and combinations that are described in the Diehl patent are described in and covered by the claims of the plaintiff's patent, such construction and combinations as are covered by the Diehl patent do not constitute any infringement of the plaintiff's patent;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Forty-three.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court
768 to give to the jury the following instruction:

"The following are definitions which define the proper meaning of the word 'skill.'

"Webster's Unabridged Dictionary defines 'skill' as—'1. Knowledge; understanding. 2. The familiar knowledge of any art or science, united with readiness and dexterity in execu tion or performance, or in the application of the art or science to practical purposes; power to discern and execute; ability to perceive and perform; as, the skill of a mathematician, of a surveyor, of a physician or surgeon, of a mechanic or seaman.'

"The Century Dictionary defines 'skill' as—'1. The discriminating or reasoning faculty; the mind. 5. Practical knowledge and ability; power of action or execution; readiness and excellence in applying wisdom or science to practical ends; expertness; dexterity.'

"The Century Dictionary defines 'skilled' as—'1. Having skill; especially, having the knowledge and ability which comes from experience; trained; versed; expert; adept; proficient. 2. Displaying or requiring skill; involving special knowledge or training; as, skilled labor.'

"The Standard Dictionary defines 'skill' as—'1. The familiar knowledge of any science, art, or handicraft, with corresponding readiness and dexterity in execution or performance, or in the application of science, art, or knowledge in general to practical purposes; practical efficiency; dexterity.'

"The Standard Dictionary defines 'skilled' as—'Having or demanding skill, especially that obtained by long practical ex-
769 perience; expert; proficient; as, a skilled workman; skilled labor;'" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Forty-four.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"A patentable invention is a mental result. It must be new and shown to be of practical utility. Everything within the domain of the conception belongs to him who conceived it. The machine, process, or product is but its material reflex and embodiment. A new idea may be ingrafted upon an old invention, be distinct from the conception which preceded it, and be an improvement. In such case it is patentable. The prior patentee cannot use it without the consent of the improver, and the latter cannot use the original invention without the consent of the former. But a mere carrying forward or new or more extended application of the original thought, a change only in form, proportions, or degree, the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means with better results, is not such inven-

tion as will sustain a patent. These rules apply alike, whether
770 what preceded was covered by a patent or rested only in public knowledge and use. In neither case can there be any invasion of such domain and an appropriation of anything found there. In one case everything belongs to the prior patentee; in the other, to the public at large;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Forty-five.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"If the jury believe from the testimony that the method of placing two bearings of revolving and oscillating shafts upon a single metal casting was well known and in common use prior to the plaintiff's alleged invention, and also believe that all of the advantages which resulted from such method of combination was well known to skilled mechanics generally, and also believe that the placing of the bearings of the treadle trunnions in the lower extremities of the double vertical brace was but the substitution of a well-known equivalent arrangement and combination for the methods of fixing treadles in sewing-machine stands which were already in public use, and well known, then the jury should conclude that the combination of the plaintiff's first claim was
771 merely the substitution of mechanical equivalents for the means which were already in use for accomplishing the result of fixing the treadle in the sewing-machine stand in a convenient manner for operating the machine by conveying motion to its band wheel, and that such substitution did not involve invention;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Forty-six.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"To render a patent valid, the patentee must be the first inventor of what is covered by its claims and he must also be an original inventor thereof. Unless Herman Cramer was the first and original inventor of the combination covered by his said first claim, the claim is void and your verdict should be for the defendant;" which said instructions the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

772 *Exception Forty-seven.*

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"Upon the question of invention the court instructs you that invention as applied to a machine or an improvement thereof consists in the finding out and constructing or discovering, for the first time, something that was not before known;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Forty-eight.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"It is settled by many decisions of the United States Supreme Court that the application of an old process or machine to a similar or analogous subject, with no change in the manner of application and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result had not before been contemplated;" which said instruction the court refused to give as requested.

773 To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Forty-nine.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"It is settled law that a mere carrying forward or new or more extended application of the original thought, a change only in form, proportions or degree, the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means with better results, is not such invention as will support a patent;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Fifty.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"Unless something, which was not already known to me-
774 chanics, of combination and construction was learned, for the first time, by the alleged invention of the combination that is covered by the plaintiff's first claim, there could not have been any invention in the making of that combination, even though it might have differed somewhat in form from any prior combination;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Fifty-one.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"Where a combination already exists of operating mechanical devices, it is not invention for any person to take one or more of those devices from the combination, and substitute for the device or devices so withdrawn, other devices which were in common use, for performing the same kind of services as the devices performed which were withdrawn from the combination, and in such case it makes no difference whether the substituted devices made the combination operate with more or less friction than the original combination operated or not;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its
775 counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Fifty-two.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"When a combination of mechanical devices is once made, the law conclusively presumes that skillful mechanics, from a knowledge of their business, know which, among all the devices that are in common use for performing the respective services which each one of the several devices in the combination respectively perform, will be best adapted to the use in such combination, and no substitution of such known devices, or any of them, for the similar devices which are already in the combination will be patentable; and any

patent granted for any such substitution will be void;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Fifty-three.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

776 "If the jury believe from the evidence that prior to the time when Herman Cramer made his alleged invention it was a well-known and common practice to mount revolving and oscillating journals or shafts in two bearings, one of which bearings was at or near each respective end of such journal or shaft; and also believe that both of such bearings were rigidly attached to a single metal frame which carried both of such bearings and held them constantly in rigid alignment with each other, then the jury should conclude that there was not any invention in merely hanging the two ends of the treadle trunnions in the two lower extremities of the double vertical brace;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Fifty-four.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"It could not constitute any invention to apply for the first time in a sewing-machine stand a method of mounting the treadle in a single casting, if the same method of mounting revolving and oscillating shafts in a single casting was an old and well-known method, which, prior thereto, has been in common use for mounting

777 revolving and oscillating shafts and journals and trunnions in single castings which were applied in mechanisms other than sewing-machine stands;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Fifty-five.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

"The application of an old device or machine to a similar or analogous subject, with no change in the manner of application, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of the result has not before been contemplated;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Fifty-six.

Prior to said charge and to the argument of counsel, the counsel for defendant submitted to the court and requested the court to give to the jury the following instruction:

778 "Where a claim of a patent is for a combination of devices, it is not infringed by the use of all but one of the devices and the use of another device which does not perform the same functions as were performed by the omitted device, for where one combination is asserted to be an infringement of another, a device in one to be the equivalent of a device in the other must perform the same functions in substantially the same way;" which said instruction the court refused to give as requested.

To which said refusal of the court the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

The entire charge given by the court to the jury was as follows:

Charge to the Jury.

The COURT: "Gentlemen of the jury, I desire to congratulate you upon the approaching termination of this long trial. It may at times have been somewhat tedious, but it has been deemed by the parties in interest as a case of importance, and more than usual care appears to have been taken in the production of evidence and in presenting to you all the issues in the case.

"For the patience you have exhibited and the interest you have taken in the proceedings, you are entitled to the thanks of the court. I take pleasure in commending you for the manner in which you have performed this public duty, and I have no doubt

779 your verdict will be the result of a full and careful consideration of the whole case, terminating this long litigation between the parties to their reasonable satisfaction and in the interest of substantial justice.

"As you are aware, this is an action for infringement of a patent granted to Herman Cramer, of Sonora, California, by the United States, on the 30th day of January, 1883, for a treadle for sewing machines, etc. The term of the patent was seventeen years, and therefore expired on the 30th day of January, 1900.

"The invention is described as 'a new and improved sewing-machine treadle.'

"Every patent not void on its face is by law *prima facie* evidence that the thing patented was an invention, that it is new and useful, and that the patentee was the original and first inventor. By *prima facie* evidence it is meant that the patent itself is sufficient to establish the above facts in the absence of any evidence to the contrary. Therefore the plaintiff's patent in this case is *prima facie* evidence that the thing patented was an invention, that it was new and useful, and that the plaintiff was the original and first inventor thereof.

"The law requires that the inventor or discoverer shall file with his application for a patent, a written description of the same, in such 'full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use, the same.' The object of this requirement is, that the public
780 may be enabled to practice the invention when the patent has expired.

"The law further requires that the inventor 'shall particularly point out and distinctly claim the part, improvement, or contribution which he claims as his invention or discovery.' The object of this requirement is, that while the patent is in force, others may be informed of the precise claim of the patentee, and may not ignorantly infringe his exclusive right.

"The patent in this case contains two claims. It is not charged that there has been any infringement of the second claim of the patent, and the present suit is to obtain damages for the alleged infringement of the first claim only. That claim reads as follows:

"'The vertical double brace joining the legs of the two ends of a sewing machine, provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings, substantially as specified.'

"This claim of the patent is what is known in law as a combination claim. A combination claim is one which takes various mechanical elements, joins them together in such a way as to make an operative mechanism, the action of which is produced by the joint action of all of the mechanical elements made in the combination.

"It is claimed that the fundamental idea of the Cramer device consists in hanging or mounting the treadle in the lower end of the vertical double brace of the machine. In so combining the
781 brace and treadle, it is necessary that there should be bearings of some kind for the treadle to oscillate on. In his drawings and description Cramer has shown knife-edge bearings for that purpose, but any other form of bearings which would accomplish the same purpose in substantially the same way would be within the limits of the patent so far as that element is concerned. In other words, Cramer's invention did not consist in knife-edge bearings in and by themselves, but consists in combining the double vertical brace and treadle by means of or through the medium of trunnioned knife-edge bearings, or any mechanical equivalent

thereof. At the time of Cramer's invention knife-edge bearings and point-center bearings and other forms of bearings were old. Cramer selected the knife-edge form as the one which he considered best. The law required him to specify only one form, and, having done that, he would be entitled to use any other form which would be a mechanical equivalent thereof, although that other form is not spoken of in his patent.

"No patent can cover or protect anything except an invention or discovery, and it cannot protect any invention or discovery except that which is covered by the claims of the patent. The specifications and drawings of a patent frequently describe the things that are old to which the invention or discovery patented appertains, for the purpose of illustrating the same, but the things so described that are old are not covered or protected by the patent.

"The patent does not cover or protect anything whatever except what is distinctly pointed out and covered by the claims of the patent.

782 "The combination of the first claim of the plaintiff's patent includes: First, a vertical double brace joining the legs of the two ends of a sewing machine; second, holes through the lower extremities of such double brace to serve as bearings; third, a treadle; fourth, trunnions on each side of the treadle fitted to oscillate in the bearings which are provided by the holes through the lower extremities of the vertical double brace. .

"Bearing in mind these elements of the first claim of plaintiff's patent upon which he rests this action, we will now proceed to consider the defenses interposed by the defendant in this action, which are as follows:

"1. Prior adjudication in an action brought by the plaintiff against the defendant and Willis B. Fry, May 31, 1893, for an infringement of the same patent, in which action a judgment of dismissal was entered in favor of the present defendant and a subsequent verdict and judgment rendered in favor of Willis B. Fry against the plaintiff, April 12, 1895.

"2. That plaintiff's patent was invalid, by *a* reason of the fact that the infringement therein described did not involve the exercise of the inventive faculty, and that the first conception or original idea thereof required nothing more than the usual knowledge of an ordinarily skilled mechanic.

"3. That the plaintiff was not the original and first and sole inventor of the improvement described in the patent thereof, but on the contrary, that the said improvement had been devised and described by others prior to the time when the plaintiff claims to have invented his improvement.

783 "4. That defendant's mechanism, manufactured under the Diehl patent, is no infringement of plaintiff's patent.

"We will now consider these defenses in the order named.

"First, as to the defenses of a prior adjudication.

"Testimony has been introduced in this case on behalf of the defendant, tending to show that in the litigation of Cramer *vs.* Fry, in this court, where the same patent was at issue, and the same de-

vice was asserted to be an infringement thereof, the present defendant, The Singer Manufacturing Company, defended its agent Fry therein, furnished counsel for the defendant Fry, and paid all the expenses of said litigation. If you believe from the evidence that such defense was so made by the Singer Manufacturing Company and was not a secret defense, but was an open defense and known to the plaintiff Cramer at the time of the trial of said case, then in such case the plaintiff Cramer is bound by the judgment in that case, and you will find for the defendant, and need not proceed further. If you sustain this defense of prior adjudication, you end the case. But if on the other hand, you find that the defense of the Singer Manufacturing Company in the case against Fry was secret and not open and known to the plaintiff, then you will proceed to consider the other defenses. You will recall, gentlemen, that the evidence with respect to this prior adjudication consisted, first, of the judgment record of that case introduced in evidence; the opening statement of Mr. Boone to the jury in the trial of that
784 case; and the statement of Mr. Kierce as to the conversation between him and Mr. Cramer in the office of Mr. Boone wherein Mr. Cramer is alleged to have said that he hoped counsel would be well paid by the Singer Manufacturing Company.

"The second defense to which your attention is called, is that plaintiff's patent is invalid because the improvement therein described and claimed did not involve the inventive faculty, and that the first conception or original idea thereof required nothing more than the usual knowledge of an ordinarily skilled mechanic.

"A patent must combine utility, novelty, and invention. It may, in fact, embrace utility and novelty in a high degree and still be only the result of mechanical skill, as distinguished from invention. A person, to be entitled to a patent, must have invented or discovered some new or useful art, machine, manufacture, or composition of matter, or some new and useful improvement thereof. It is not enough that a thing shall be new in the sense that, in the shape or form in which it is produced, it shall not have been before new, and that it shall be useful, but it must amount to an invention or discovery.

"It would not constitute any invention to apply for the first time in a sewing-machine stand a method of mounting the treadle in a single casting, if the same method of mounting revolving and oscillating shafts in a single casting was an old and well-known method, which, prior thereto, had been in common use for mounting revolving and oscillating shafts and journals and trunnions in single castings which were applied in mechanism other than sewing-machine stands.

785 "In other words, it does not constitute invention to merely apply old and well-known mechanical combinations to new uses, which new uses are strictly analogous to the old well-known uses to which the same combinations had already been commonly applied, and in which the same character of results had been obtained.

"To make a combination of mechanical devices patentable there

must be a joint action between all of the mechanical elements of devices of which the combination is composed. All the constituents must so enter into it as that each qualifies every other. It must form either a new machine of a distinct character and functions, or produce a result due to the joint and co-operating action of all the elements, and which is not the mere adding together of separate contributions. Otherwise it is only a mechanical juxtaposition and not a vital union.

"The defendant in this case claims that the said first claim of the plaintiff's patent does not cover any patentable invention, but that the construction and combination of devices covered by said first claim does not involve any greater degree of mechanical skill than that which *has* possessed by mechanics skilled in the construction and operation of sewing-machine treadles prior to the time that the plaintiff made his alleged invention. If the construction and combination covered in said first claim of the plaintiff's patent did not involve or require any further knowledge than that which was possessed by skillful mechanics at and prior to the time when the plaintiff made the combination, then the claim of the patent is void for want of invention. No person is at liberty to take a patent for anything except an actual invention.

786 "In considering this question of invention, the quantity or amount thereof displayed in producing the combination is not material. A patent which displays only a small amount of invention may be just as valid, so far as this question is concerned, as one which displays a large amount. It is the existence of any invention at all, not its quantity or amount, for you to inquire into, and if you find that the combination covered by claim 1 of the Cramer patent displays any invention whatever, however small may be the amount or quantity, then it will be your duty to find that it is not void for want of invention.

"Evidence has been introduced tending to show that, prior to and at the time of the plaintiff's alleged invention, mechanics were well acquainted with many methods that were then in common use by means of which two bearings or revolving and oscillating shafts were fixed upon a single casting so as to obtain a secure, permanent, and rigid alignment of such bearings, and that such mechanics were also well acquainted with the various methods which were already in common public use for placing treadles in the stands of sewing machines so as to conveniently transmit motion and power to the band wheels for operating the machines. If the jury believe from the evidence that there were skilled mechanics possessing such information, and also believe that such mechanics, by virtue of such knowledge alone, knew how to make the combination that is described in the plaintiff's said first claim, then you should conclude that it did not require invention to make such combination, and your verdict should be for the defendant.

787 "When the defendant attempts to overthrow the *prima facie* case made out by the patent itself, he is required to produce evidence of such character as will establish the fact beyond a doubt. Ordinarily, in civil cases a mere preponderance of evidence

is all that is required to prove a particular fact. But in patent cases, where a defendant attempts to prove the invalidity of the plaintiff's patent, the rule is different. In such cases the defendant must prove the invalidity of the patent by evidence that is clear and convincing, and which establishes the fact beyond a doubt. It is not sufficient that he should merely raise a doubt in your minds. If he succeeds only in raising a doubt, then the point must be decided in favor of the validity of the patent. The *prima facie* evidence furnished by the patent itself is sufficient to establish the fact of invention and overcomes a mere doubt that might arise in your minds as to the existence of invention in the particular mechanism for which the patent has been granted.

Anticipation.

"The third defense interposed by the defendant is the claim that the plaintiff's patent was anticipated; that is to say, that the combination was already in existence and had been invented or constructed by others before Cramer devised it. In this connection, it is claimed by the defendant that the combination was anticipated by the making, using, and selling of the same at the factory of George Bent, in Chicago, and that it was also anticipated by
788 certain letters patent to other people prior to the date of the Cramer patent. This question of anticipation is a question of fact for you to determine, the burden of proving it is on the defendant, and it must produce such evidence as will satisfy your minds beyond a reasonable doubt that the anticipation was prior to the date of the patent or prior to the date of the application for the patent when the application discloses the invention. But where an anticipating device or combination is proven beyond a reasonable doubt to have existed prior to the date of the plaintiff's patent, the burden is shifted to the plaintiff to prove, by convincing preponderance of evidence, that his invention was made still earlier than the anticipating device or combination; and if the plaintiff does not introduce sufficient evidence to outweigh whatever evidence is introduced to the contrary, the patent must be held void for want of novelty.

"Concerning the alleged anticipation in Chicago, the witnesses whose depositions were taken at Chicago testified that in the latter part of the year 1880, a device substantially embodying the idea of the Cramer device was gotten up at the factory of George Bent and placed upon the market and sold in the year 1881. I call your attention to the exhibit now on the stand. Of course, this was prior to the date of the Cramer patent, but, under the law, anticipation, in order to be successful, must be shown to have existed prior to the date at which the patented invention was made, and not merely prior to the date of the patent—provided, of course, that the invention is within two years prior to the date of the application for the patent.

789 "In this case the plaintiff has met this attack on his patent by producing evidence for the purpose of showing that his invention was actually made in June, 1880. He produced his own testimony and that of his daughter, Mrs. Abbott, and certain paste-

board models, for the purpose of showing that he finished and perfected his invention as early as the middle of June, in the year 1880. If you believe this evidence, then you will find as a fact that his inventiou was made at that time, to wit, in June, 1880; and in that event the making, using, and selling of the device in Chicago by George Bent or any other person in the latter part of 1880 and the early part of 1881, will not be an anticipation of the Cramer invention, nor will it have any effect whatever upon the validit- of his patent.

"One prior patent relied upon by defendant as anticipation is an English patent, issued to one Bourdin in 1874. This patent cannot act as an anticipation unless it contains in itself a description of substantially the same mechanism, operating substantially in the same way as that of the first claim of the Cramer patent. The description must be in such full, clear, and exact terms as to enable a person skilled in the art or science to construct and operate it without experiment and without further exercise of the inventive faculty. A drawing alone and by itself, without any verbal description, is not sufficient as an anticipation.

"If you find that in the device of the Bourdin patent, which is claimed by the defendant to be an anticipation, the treadles
790 are mounted on conical collars held in place by set-screws on a rod, and that said rod is firmly screwed at each end in the vertical brace of the machine, you are instructed that such mechanism is not the invention covered by claim 1 of the Cramer patent, and is no anticipation.

"Concerning the contention of the defendant that the Cramer patent was anticipated by prior patents, only those patents can be considered by you which were prior to the actual date of the Cramer invention. The application for the Cramer patent was dated the 25th of May, 1882. The patent is dated January 30, 1883. But Cramer claims to have devised the invention in June, 1880. If you believe his testimony and that of his daughter, Mrs. Abbott, on that point, then you need not consider any prior patents in connection with this subject which are not dated prior to June, 1880. But if this evidence is not satisfactory upon this point, you will take the evidence furnished by the patent itself as to the date of the invention. In considering patented devices or combinations claimed to be prior to plaintiff's patent, you are to compare the device therein shown and described with the Cramer device, and determine whether or not they are substantially the same as the Cramer device.

Infringement.

"The fourth and last defense is that the defendant's manufacture under the Diehl patent is no infringement of plaintiff's patent.

"What is an infringement? It is an infringement of a pat-
791 ent to make, or sell, or use, without legal permit anything which forms the subject-matter of any claim or clause of a claim in a valid patent; for a patent conveys to the patentee the

exclusive right to do each and all of these three things during the existence or life of the franchise.

"To constitute an infringement it is not necessary that the defendant should have copied the various elements of the plaintiff's combination exactly and precisely, in all of their details and proportions, and in the precise form shown in the plaintiff's patent, but if the defendant has incorporated into its structure the substance and essence of the patented invention, so as to obtain substantially the same result by substantially the same means and mode of operation, then there will be an infringement, although the defendant may have varied from the mere form and proportion, shape or location of the elements of the combination.

"In determining the question of infringement, you are not to determine similarities, or differences merely by the names of things, but are to look at the machines or their several devices and elements in the light of what they do or what function they perform, and how they perform it, and to find that a thing is substantially the same as another if it perform substantially the same function in substantially the same way, and that things are substantially different when they perform different duties or in substantially a different way.

"The inquiry on this question of infringement should be whether the defendant's device is in substance and effect merely a
792 colorable evasion of the plaintiff's contrivance, or whether it is a new and substantially different thing. If the defendant has taken the same general plan and applied it to the same purpose, and produced the same effect in substantially the same way, although it may have varied the form of construction of some of the elements it will in contemplation of the patent law be the same thing, and hence an infringement.

"The defendant's device is made under and in accordance with letters patent of the United States issued to the Singer Manufacturing Company as the assignee of Philip Diehl, which patent is subsequent to the date of the Cramer patent, the Cramer patent being dated January 30, 1883, and the Diehl patent October 14, 1884. The mere fact, however, that this Diehl patent was issued to the Singer Manufacturing Company is not conclusive evidence that the device therein shown is not an infringement of the Cramer patent. It may be merely an improvement. That is a question of fact for you to determine, and if you determine that the Diehl structure is in some respects an improvement, but in others an infringement of Cramer's patent, the fact that the patent was issued to the defendant for the Diehl structure subsequent to Cramer's patent, will afford no protection to the defendant against the charge of infringement. It very frequently happens that after a patent is issued to one person another person may subsequently secure a patent as an improvement upon the first, but such subsequent patent affords no
793 protection to the holder thereof against the charge of infringement of the first patent, if as a matter of fact there be an infringement.

"To determine whether a subsequent patent is an infringement

of a prior patent or of a claim of the prior patent, it is necessary to compare the device or combination of the later patent with that of the prior patent or claim, and ascertain whether any element of the prior patent or claim has been appropriated or adopted in the subsequent patent. To aid you in such an inquiry, I will read to you the five claims of the Diehl patent, as follows:

"'1. In a sewing-machine stand, a cross-brace having supports for both the band wheel and the treadle integral with said brace.

"'2. In a sewing-machine stand, a cross-brace having supports for both the band wheel and the treadle integral with said brace, and provided with means for adjusting and taking up the wear of such band wheel and treadle.

"'3. In a sewing-machine stand, a cross-brace adapted to connect the legs or side pieces thereof, provided at one side with bearings for the fly-wheel crank shaft, and having a support at its base for the treadle, substantially as set forth.

"'4. The combination, with the cross-brace of a sewing-machine stand, of a crank shaft and a treadle, both mounted in the said brace, substantially as set forth.

"'5. A cross-brace for sewing-machine stands, having at its base a cross-bar, combined with a treadle mounted in said cross-bar, substantially as set forth.'

"In the Cramer patent it is said that the treadle is provided with trunnions cast on the sides thereof, and having knife-edges
794 which oscillate in V-shaped recesses in holes in the ends of the vertical double brace. In the defendant's machine conical pointed screw-bolts have been inserted from the outside through holes in the lower ends of the vertical double brace extending inward towards the treadle, and countersunk holes have been made in the sides of the treadle, so that the conical points of the screw-bolt fit into these holes, and thereby constitute bearings for the treadle to oscillate on, commonly called point-center bearings. If you find that this is a mere reversal of parts and accomplishes substantially the same result in substantially the same way, then it is a mechanical equivalent of the Cramer construction in that regard and would be an infringement.

"If you believe from the evidence that the screw-bolts with their point centers, which were used by the defendant, did not operate in substantially the same way as that in which the trunnions of the plaintiff's patent operated, your verdict should be for the defendant.

"If, after considering the elements of plaintiff's patent and the evidence in its support, and the evidence in support of the defenses interposed by the defendant to this action, you shall conclude that neither of the defenses has been sustained by the defendant, and that your verdict will be in favor of the plaintiff, you will then have to consider the question of damage sustained by the plaintiff by reason of the defendant's infringement.

"Section 4921 of the Revised Statutes of the United States, as amended by the act of March 3, 1897, provides as follows:
795 "'In any suit or action brought for the infringement of any patent, there shall be no recovery of profits or damages

for an infringement committed more than six years before the filing of the bill of complaint or the issuing of the writ in such suit or action, and this provision shall apply to existing causes of action.'

"This statute applies to this case. It appears that the present suit was commenced October 8, 1896. Under this statute, the period for which damages may be recovered by plaintiff, if your verdict shall be in his favor, would be for the six years between October 8, 1890, and October 8, 1896.

"On the question of damages, the plaintiff claims that by reason of using his patented device in sewing machines, he was enabled to sell, and did sell, sewing machines at an advanced price of five dollars over and above what he sold the same machine for without his patented improvement, and that it cost him $1.50 to put the patented feature in each of the machines, thereby enabling him to realize a net profit of $3.50 on each machine in which his patented feature was user. He further claims that the defendant has sold large numbers of machines containing a device in infringement of his claim 1, thereby depriving him of sales which he would otherwise have made. If you find these facts to be true, and that the plaintiff would have made the same number of sales of his own machines as those made by the defendant of its machines if the infringement had not intervened, and that the plaintiff was able to supply the demand therefor, and that the market value of
796 the invention covered by claim 1 of the Cramer patent is $3.50 on each machine, then you will be justified in estimating the damages by multiplying the number of machines containing the Diehl structure sold by the defendant during the infringing period, by $3.50, and the amount so ascertained will be the measure of the plaintiff's damages, if you find that the patent is valid and has been infringed, and that the plaintiff is entitled to damages. Those are questions of fact for you to determine from all the evidence in the case. The evidence as to the amount of damages claimed by the plaintiff is not very satisfactory, but it may be that the actual sales made by the defendant in this district, of sewing machines containing the alleged infringing device, for the period named, could not have been ascertained without great labor and delay, and as a practical way of presenting this evidence the plaintiff has done all that could be reasonably expected, under the circumstances.

"You will recall the testimony of Mr. Chandler. He says that after examining the books of the company in San Francisco, he finds that for the month of October, 1895, the gross sales of machines containing the Diehl invention were 251; repossession, 45; net, 206. For the month of June, 1896, gross sales, 208; repossession, 28; net 180. For the month of January, 1895, gross sales, 175; repossession, 39; net sales, 154. An average for the two months of October, 1895, and June, 1896, would be 193 net, and an average for the three months of January, 1895, October, 1895, and June, 1896, would be 173⅓ net. If, after considering this evidence, you are unable to find the damages sustained by the plaintiff—
797 assuming, of course, that your verdict is in his favor—by reason of defendant's infringement of the plaintiff's patent

for the six years prior to the commencement of this suit, your verdict in that case should be for nominal damages only.

"The testimony of the witnesses in this case is contradictory as to some of its features. It is for you, gentlemen, to determine where the truth lies. You are the sole judges of the credibility and weight to be given the testimony of the different witnesses who have appeared and testified in this case. A witness is presumed to speak the truth. This presumption, however, may be repelled by the manner in which he testified, by the character of his testimony, by his motives, or by contradictory evidence. In judging of the credibility of a witness, you may believe or disbelieve the whole or any part of the evidence of a witness, as may be dictated by your judgment as reasonable men. You should carefully scrutinize the testimony given, and in so doing, consider all the circumstances under which such witness has testified, his degree of intelligence, his manner while upon the stand, the relation which he bears to the case, the manner in which he might be affected by the verdict, the extent to which he is corroborated by the testimony, if at all, and any other circumstances which tend to shed light upon his credibility. But you should weigh the testimony as reasonable men, and in this respect you must remember that the power to judge of the effect of the evidence is not an arbitrary one, but is to be exercised with legal discretion and in subordination to the rules of evidence.

You are not bound to decide in conformity with the declara-
798 rations of any number of witnesses which do not produce conviction in your minds as against a less number whose testimony satisfies your minds. The evidence is to be estimated by its own intrinsic weight, and you are the sole judges of all the evidence in the case.

"Your verdict, gentlemen, must be unanimous. When you have arrived at a verdict in this case, you will place it in writing upon one of the forms which I shall hand you for this purpose. If you find for the plaintiff, you will say, 'We, the jury, find for the plaintiff;' and assess the damages at the amount you determine the plaintiff has sustained. If you find for the defendant, you will say, 'We, the jury, find for the defendant.' Your verdict must be signed by the foreman. I now pass you the two forms of verdict, one of which you will use and return."

Exception Fifty-seven.

In the course of the charge to the jury, the court instructed the jury as follows:

"In his drawings and description Cramer has shown knife-edge bearings for that purpose, but any other form of bearings which would accomplish the same purpose in substantially the same way would be within the limits of the patent so far as that element is concerned. In other words, Cramer's invention did not consist in knife-edge bearings in and by themselves, but consists in combining the double vertical brace and treadle by means of or through the medium of trunnioned knife-edge bearings, or any mechanical

equivalent thereof. At the time of Cramer's invention, knife-
799 edge bearings and point-center bearings and other forms of bearings were old. Cramer selected the knife-edge form as the one which he considered best. The law required him to specify only one form, and having done that, he would be entitled to use any other form which would be a mechanical equivalent thereof, although that other form is not spoken of in his patent."

To which said part of said charge the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Fifty-eight.

In the course of the charge to the jury, the court instructed the jury as follows:

"When the defendant attempts to overthrow the *prima facie* case made out by the patent itself, he is required to produce evidence of such a character as will establish the fact beyond a doubt. Ordinarily, in civil cases a mere preponderance of evidence is all that is required to prove a particular fact. But, in patent cases, where a defendant attempts to prove the invalidity of the plaintiff's patent, the rule is different. In such cases the defendant must prove the invalidity of the patent by evidence that is clear and convincing, and which establishes the fact beyond a doubt. It is not sufficient that he should merely raise a doubt in your minds. If he succeeds only in raising a doubt, then the point must be decided in favor of the validity of the patent. The *prima facie* evidence fur-
800 nished by the patent itself is sufficient to establish the fact of invention and overcome a mere doubt that might arise in your minds as to the existence of invention in the particular mechanism for which the patent has been granted."

To which said part of said charge the defendant, by its counsel then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Fifty-nine.

In the course of the charge to the jury, the court instructed the jury as follows:

"In this case the plaintiff has met this attack on his patent by producing evidence for the purpose of showing that his invention was actually made in June, 1880. He produced his own testimony and that of his daughter, Mrs. Abbott, and certain pasteboard models, for the purpose of showing that he finished and perfected his invention as early as the middle of June, in the year 1880. If you believe this evidence, then you will find as a fact that his invention was made at that time, to wit, in June, 1880, and in that event the making, using, and selling of the device in Chicago by George Bent or any other person in the latter part of 1880 and the early part of 1881, will not be an anticipation of the Cramer inven-

tion, nor will it have any effect whatever upon the validity of his patent."

To which said part of said charge the defendant, by its counsel then and there duly excepted, and hereby tenders this, its
801 bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Sixty.

In the course of the charge to the jury, the court instructed the jury as follows:

"What is an infringement? It is an infringement of a patent to make, or sell, or use, without a legal permit, anything which forms the subject-matter or any claim or clause of a claim in a valid patent; for a patent conveys to the patentee the exclusive right to do each and all of these three things during the existence or life of the franchise."

To which said part of said charge the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal and the court does hereby sign and seal the same.

Exception Sixty-one.

In the course of the charge to the jury, the court instructed the jury as follows:

"To constitute an infringement, it is not necessary that the defendant should have copied the various elements of the plaintiff's combination exactly and precisely, in all of their details and proportions, and in the precise form shown in the plaintiff's patent, but, if the defendant has incorporated into its structure the substance and essence of the patented invention, so as to obtain substantially the same result by substantially the same means and mode of
802 operation, then there will be an infringement, although the defendant may have varied from the mere form and proportion, shape or location of the elements of the combination.

To which said part of said charge the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Sixty-two.

In the course of the charge to the jury, the court instructed the jury as follows:

"In determining the question of infringement, you are not to determine similarities or differences merely by the names of things, but are to look at the machines or their several devices and elements in the light of what they do or what function they perform, and how they perform it, and to find that a thing is substantially the same as another if it performs substantially the same function in substantially the same way, and that things are substantially

different when they perform different duties or in substantially a different way."

To which said part of said charge the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Sixty-three.

In the course of the charge to the jury, the court instructed the jury as follows:

803 "The inquiry on this question of infringement should be, whether the defendant's device is in substance and effect *is* merely a colorable evasion of the plaintiff's contrivance, or whether it is a new substantially different thing. If the defendant has taken the same general plan and applied it to the same purpose, and produced the same effect in substantially the same way, although it may have varied the form of construction of some of the elements, it will in contemplation of the patent law, be the same thing, and hence an infringement."

To which said part of said charge the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Sixty-four.

In the course of the charge to the jury, the court instructed the jury as follows:

"If you determine that the Diehl structure is in some respects an improvement, but in others an infringement of Cramer's patent, the fact that the patent was issued to the defendant for the Diehl structure subsequent to Cramer's patent, will afford no protection to the defendant against the charge of infringement. It very frequently happens that after a patent is issued to one person, another person may subsequently secure a patent as an improvement upon the first, but such subsequent patent affords no protection to the holder thereof against the charge of infringement of the first patent, if, as a matter of fact, there be an infringement."

804 To which said part of said charge the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Sixty-five.

In the course of the charge to the jury, the court instructed the jury as follows:

"To determine whether a subsequent patent is an infringement of a prior patent or of a claim of the prior patent, it is necessary to compare the device or combination of the later patent with that of

the prior patent or claim, and ascertain whether any element of the prior patent or claim has been appropriated or adopted in the subsequent patent."

To which said part of said charge the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Sixty-six.

In the course of the charge to the jury, the court instructed the jury as follows:

"Section 4921 of the Revised Statutes of the United States, as amended by the act of March 3, 1897, provides as follows:

'In any suit or action brought for the infringement of any patent, there shall be no recovery of profits or damages for an infringement committed more than six years before the filing of the bill of
805 complaint or the issuing of the writ in such suit or action, and this provision shall apply to existing causes of action.'

"This statute applies to this case. It appears that the present suit was commenced October 8, 1896. Under this statute, the period for which damages may be recovered by plaintiff, if your verdict shall be in his favor, would be for six years between October 8, 1890, and October 8, 1896."

To which said part of said charge the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Sixty-seven.

In the course of the charge to the jury, the court instructed the jury as follows:

"On the question of damages, the plaintiff claims that by reason of using his patented device in sewing machines, he was enable- to sell, and did sell sewing machines at an advance price of five dollars over and above what he sold the same machine for without his patented improvement, and that it cost him $1.50 to put the patented feature in each of the machines, thereby enabling him to realize a net profit of $3.50 on each machine in which his patented feature was used. He further claims that the defendant has sold large numbers of machines containing a device in infringement of his claim 1, thereby depriving him of sales which he would otherwise have made. If you find these facts to be true, and that the
806 plaintiff would have made the same number of sales of his own machines as those made by the defendant of its machines if the infringement had not intervened, and that the plaintiff was able to supply the demand therefor, and that the market value of the invention covered by claim 1 of the Cramer patent is $3.50 on each machine, then you will be justified in estimating the damages by multiplying the number of machines containing the Diehl

structure sold by the defendant during the infringing period, by $3.50, and the amount so ascertained will be the measure of the plaintiff's damages, if you find that the patent is valid and has been infringed and that the plaintiff is entitled to damages."

To which said part of said charge the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

Exception Sixty-eight.

In the course of the charge to the jury, the court instructed the jury as follows:

"The evidence as to the amount of damages claimed by the plaintiff is not very satisfactory, but it may be that the actual sales made by the defendant in this district, of sewing machines containing the alleged infringing device, for the period named, could not have been ascertained without great labor and delay, and as a practical way of presenting this evidence the plaintiff has done all that could be reasonably expected, under the circumstances."

807 To which said part of said charge the defendant, by its counsel, then and there duly excepted, and hereby tenders this, its bill of exceptions, for the court to sign and seal, and the court does hereby sign and seal the same.

The jury then retired and soon afterward rendered a verdict in favor of the plaintiff for damages in the sum of twelve thousand and four hundred and fifty-six dollars.

The foregoing contains all the testimony, evidence and proceedings taken or had at the trial.

And now, in furtherance of justice, and that right may be done, the defendant, by its counsel, presents the foregoing as its bill of exceptions in this case, and prays that the same may be settled and allowed, and certified and signed by the judge, as provided by law.

CHAS. K. OFFIELD,
WHEATON & KALLOCH,
Attorneys for Defendant.

The proposed bill of exceptions in this cause was served and filed on the 15th day of May, 1900, within the time allowed by stipulation of counsel and the order of this court. The counsel for plaintiff thereafter applied to and procured from the counsel for defendant sundry written stipulations giving plaintiff additional time within which to prepare, serve and file amendments to defendant's proposed bill of exceptions. Thereafter the counsel for plaintiff procured orders from this court further extending plaintiff's time within which to prepare, serve and file amendments to defendant's proposed bill of exceptions, the last of which said orders ex-

808 tended plaintiff's time for said purpose to and including the 15th day of August, 1900. The said orders of this court extending plaintiff's time for preparing, serving and filing his said

amendments were made upon the express stipulation of counsel for plaintiff, made in open court, that no objection should be made to the settlement of the bill of exceptions herein upon the ground of delay in presenting the same, or upon the ground of lack of jurisdiction to allow the same, and that said bill of exceptions when settled should be signed and sealed *nunc pro tunc* as at the term during which the trial of said cause occurred, and should become a part of the record to be sent to the circuit court of appeals in pursuance of the writ of error herein the same as if it had been settled and allowed before the issuance of said writ. On the 13th day of August, 1900, plaintiff's proposed amendments to said proposed bill of exceptions were prepared and served, and thereafter on the said 13th day of August, 1900, the defendant served and filed its dissent to said proposed amendments and gave notice to the plaintiff and his attorneys that on Thursday, August 16th, 1900, the said defendant would present its proposed bill of exceptions and the amendments proposed thereto to the judge who tried said cause for settlement. On the said 16th day of August, 1900, the said defendant did present said proposed bill of exceptions and amendments to the said judge for settlement, the plaintiff's attorney being then and there present. Thereupon the matter of the settlement of said bill of exceptions was by this court continued until August 20, 1900, at the hour of 10.30 a. m. Thereafter, on August 20th, 1900,
809 the said proposed bill of exceptions and amendments were presented to said judge for settlement, the attorneys for both plaintiff and defendant being present, and the said proposed amendments were disposed of by allowance or rejectment. The above and foregoing is now hereby settled and allowed by me as the defendant's bill of exceptions in said cause, this 20th day of August, 1900.

WM. W. MORROW, *Judge.*

(Endorsed:) Filed August 20, 1900. Southard Hoffman, clerk.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
THE SINGER MANUFACTURING COMPANY, Defendant.

Petition for Writ of Error.

The Singer Manufacturing Company, defendant in the above-entitled action, feeling itself aggrieved by the verdict of the jury and the judgment entered thereupon on the 20th day of April,
810 1900, whereby it was adjudged that claim one of the plaintiff's patent sued on herein was good and valid in law, and that the defendant had infringed the same, and that the plaintiff have and recover of and from the defendant the sum of twelve thousand and four hundred and fifty-six dollars damages with costs, comes

now, by Charles K. Offield, M. A. Wheaton and I. M. Kalloch, its attorneys, and prays said court for an order allowing said defendant to prosecute a writ of error to the honorable circuit court of appeals for the ninth circuit, under and according to the laws of the United States in that behalf made and provided; and also that an order be made fixing the amount of security which the defendant shall give and furnish upon said writ of error, and that upon the giving of such security all further proceedings in this court be suspended and stayed until the determination of said writ of error by the said United States circuit court of appeals for the ninth circuit.

And your petitioner will ever pray, etc.

Dated June 4th, 1900.

CHAS. K. OFFIELD,
WHEATON & KALLOCH,
Attorneys for Defendant.

(Endorsed:) Filed June 4, 1900. Southard Hoffman, clerk.

811 In the United States Circuit Court of Appeals for the Ninth Circuit.

THE SINGER MANUFACTURING COMPANY, Plaintiff in Error,
vs.
HERMAN CRAMER, Defendant in Error.

Assignment of Errors.

Comes now The Singer Manufacturing Company, plaintiff in error herein, by Chas. K. Offield, M. A. Wheaton, and I. M. Kalloch, its attorneys and counsel, and specifies the following as the errors accruing at the trial upon which it will rely, and which it will urge upon its writ of error in the above-entitled cause, to wit:

1.

The circuit court of the United States for the northern district of California erred in overruling the objection of counsel for defendant to the introduction in evidence of the machine, Plaintiff's Exhibit "G."

2.

The said circuit court erred in overruling the objection of counsel for defendant to the following question, and in admitting the plaintiff's following answer thereto:

"Q. Now, Mr. Cramer, regarding the prices at which you
812 sold your machines, did you get any additional price by reason of having your improvements on the machine, over the old machine?

"A. I got $5 more; I charged $5 more."

3.

The said circuit court erred in overruling the objection of counsel for defendant to the testimony of the plaintiff as to what he thought interfered with his patent.

4.

The said circuit court erred in overruling the objection of counsel for defendant to the testimony of the witness Seeley as to what might be equivalents of the knife-edge bearings of the patent sued upon, and in permitting said witness to testify as follows:

"A. Where there are a number of forms which we consider to be equivalents of each other and to operate in the same way, and where the inventor has a choice or right to select from among them, we describe the one which he prefers to use, for the reason that the Patent Office requires but one operative form to be shown. Of course, we do not limit him to that form, but use it as illustrating a number of different forms which he might use if he so desired."

5.

The said circuit court erred in overruling the objection of counsel for defendant to the following question asked at the trial of the witness A. C. Brown:

"Q. State what effect that construction would have in re-
813 gard to overcoming these old defects which you mention as being inherent in the old style of mountings."

6.

The said circuit court erred in striking out the following testimony of the witness, F. J. Kierce:

"Mr. Boone said that in the case of Cramer *vs.* Fry, he did not expect to make anything out of the defendant Fry, for the reason that he was the Singer Company's agent, but that he expected to recover judgment in that action, that is, in the case of Cramer *vs.* Fry, before the jury, and that he would make that judgment the basis of proceedings for the purpose of getting an injunction against the Singer Company. At the same time and place he said that we ought to be well paid by the Singer Company for the services which we were rendering in that action in defending it. Mr. Cramer was present at that conversation, it was said in his presence, and at the same time he suggested that we ought to be well paid for the services rendered in that case by the Singer Company. He did not participate in the other portion of the conversation to which I have just testified, except in so far as he heard it."

7.

The said circuit court erred in excluding the evidence offered from the record of testimony and proceedings in the case of Herman Cramer *vs.* Willis B. Fry, as follows:

"Q. What is this pamphlet I hand you?
"A. That is a Singer Manufacturing Company's directions for one of their styles of machines.
814 "Q. Do you sell that style of machine?
"A. We do sell very few of these.
"Q. You have sold some?
"A. There have been some sold; quite a number sold.

"Q. I refer to the machine represented on page 24 of that catalogue. State whether or not you have sold any machines of that kind, constructed in that way.

"A. Our office has handled and sold machines with that form of brace and treadle in.

"Mr. BOONE: We offer this catalogue, that page particularly, in evidence.

"Q. I now hand you a copy of a patent issued to P. Diehl on the 14th day of October, 1884——

"The COURT: Is there any objection to that page?

"Mr. NOUGUES: Page 24, figure 26.

"Mr. WHEATON: Yes, sir.

"The COURT: What is the objection?

"Mr. OFFIELD: It is only a part of a machine, and it does not show when it was done.

"Mr. BOONE: I propose to follow it up.

"Mr. WHEATON: They are offering the patent, which is much more correct.

"The COURT: Do you withdraw this page?

"Mr. NOUGUES: No, sir.

"The COURT: The objection is overruled.

"Mr. KIERCE: We except.

"Mr. BOONE: I will read this.

"The COURT: I was only admitting the diagram.

"Mr. BOONE: We offer the whole paper.

815 "The COURT: What is the object of the reading matter?

"Mr. NOUGUES: It is descriptive of the machine that they are selling, and which it is claimed is an infringement of this machine, and it sets forth the advantages that the company is claiming for that particular form of treadle."

8.

The said circuit court erred in excluding from the evidence the letter from plaintiff to the Singer Manufacturing Company, dated February 8, 1883.

9.

The said circuit court erred in excluding from the evidence the opinion of Judge McKenna in the case of Herman Cramer *vs.* Willis B. Fry, No. 11,808.

10.

The said circuit court erred in sustaining the objection of counsel for plaintiff to the following question asked at the trial of the witness, H. B. Angell:

"Q. I want to ask you whether you can find in the Cramer patent any of the changes which you find existing between the defendant's old trade-mark stand and the defendant's present Diehl stand."

11.

The said circuit court erred in refusing to instruct the jury at the

close of all the testimony to render a verdict in favor of the defendant.

816 12.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"In this case you are instructed that under the construction of the patent as given by the court, no infringement exists, and your verdict must be for the defendant."

13.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"A witness false in one part of his testimony is to be distrusted in others."

14.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"Where an anticipating fact prior to the date of a patent is proved beyond reasonable doubt, the burden is shifted to the plaintiff to prove, by convincing preponderance of evidence, that his invention was made still earlier than that fact occurred; and if the plaintiff does not introduce enough evidence to strongly outweigh whatever evidence is introduced to the contrary, the patent must be held to be void for want of novelty."

15.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

817 "The jury are instructed that in determining what in reality and fact was the invention of the plaintiff, they may refer to the various communications and statements of the plaintiff Cramer and his attorneys in the Patent Office and declarations there made, and the rulings of the Patent Office thereon, prior to the obtaining of his patent; and that if they believe from such statements and disclosures, commonly called the 'file-wrapper and contents of the patent,' that the invention of Cramer consisted as a matter of fact in providing the two lower ends of the vertical cross-brace of a sewing machine with holes formed into vertical loops to permit the entrance of the treadle, such holes being so constructed as to serve as bearings and having combined therewith a treadle provided with trunnions fitted to oscillate in said bearings substantially as specified in the patent, and if the jury should find that the vertical double brace joining the legs of the two ends of the sewing machine of defendant is not provided with holes through its lower extremities to serve as bearings, and is not combined with a treadle provided with trunnions fitted to oscillate in said holes and bearings, substantially as specified by the first claim of the Cramer patent, then the jury will find for the defendant."

16.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The jury are instructed that to constitute a pioneer patent
818 or invention, the mechanical functions performed by the patented device must be, as a whole, entirely new, a wholly novel device, or one of such novelty and importance as to mark a distinct step in the progress of the art, as distinguished from a mere improvement or perfection of what had gone before."

17.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The jury are instructed that the first claim of the Cramer patent has reference only to the vertical double brace joining the legs of the two ends of a sewing machine, and that if the jury believe from the evidence that the treadle of the defendant's sewing machine is hung in the cross-bar of said machine and not in the vertical double brace, the jury will find for the defendant."

18.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The law requires that the patentee's specification should set forth the principle and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions, and shall particularly point out the part, improvement, or combination which he claims as his own invention or discovery. We find here no authority to grant a patent for a 'principle' or a 'mode of operation,' or an idea, or any other abstraction. A machine is a
819 concrete thing, consisting of parts, or of certain devices and combination of devices. The principle of a machine is properly defined to be 'its mode of operation,' or that peculiar combination of devices which distinguish it from other machines. A machine is not a principle or an idea. The use of ill-defined abstract phraseology is the frequent source of error. It requires no great ingenuity to mystify a subject by the use of abstract terms of indefinite or equivocal meaning. Because the law requires a patentee to explain the mode of operation of his peculiar machine, which distinguishes it from others, it does not authorize a patent for a 'mode of operation as exhibited in a machine.' Much less can any inference be drawn from the statute, that an inventor who has made an improvement in a machine, and thus effects the desired result in a better or cheaper manner than before, can include all previous inventions, and have a claim to the whole art, discovery, or machine which he has improved. All others have an equal right to make improved machines, provided they do not employ the same, or substantially the same devices, or combination of devices, which constitute the peculiar characteristic of the previous invention."

19.

The said circuit court erred in refusing to give to the jury the following instruction, as requested by the defendant:

"The second claim of the patent covers a combination of mechanical devices which includes the cushion F and the block *f*. It is admitted that the defendant has not used either the cushion
820 F or the block *f*. You must therefore eliminate from your consideration the cushion F and the block *f*. In doing this you should consider the plaintiff's patent just as though it never had the cushion F or the block *f* mentioned in it."

20.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"In using the plaintiff's model, which is introduced in evidence as a machine that contains the plaintiff's patented invention, you must look at the model just as it would be if there was no cushion F or block *f* contained in it. You must eliminate the cushion F and block *f* from the model entirely and compare with the defendant's machine only what is left of said model when the said cushion and block are removed from it."

21.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"When said cushion F and block *f* are removed from said model, there will not remain any devices that are shown in the plaintiff's patent for preventing the trunnions from raising out of their bearings, or that will prevent the treadle and its trunnions from moving endwise until the end of either one or the other of its trunnions comes in contact with the iron web of the legs."

821 22.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"In considering the plaintiff's patent and model, therefore, you must read and look upon them just as though the patent did not contain a word about the cushion F or the block *f*, and just as though the model did not have in it either the said cushion or the said block."

23.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"A claim for a combination does not cover or protect any of the mechanical devices which are contained in such combination by themselves. Claiming two or more mechanical elements as a combination in law admits that each and every one of the mechanical elements so combined is old and constitutes part of the patented invention."

24.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"It is admitted by the plaintiff that there has not been any infringement by the defendant of the second claim of the patent. Damages are now claimed for an alleged infringement of the first claim of the patent only. The jury, therefore, should not
822 pay any attention to the second claim of the patent, but should decide the case just as though that claim were not in the patent at all."

25.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The plaintiff has not introduced any evidence tending to prove any damages that have resulted to him from any infringement of said first claim alone. If, therefore, you should find that said first claim had been infringed by the defendant, the damages assessed should be nominal; that is, one dollar and no more."

26.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"In order to infringe the first claim of the plaintiff's patent, the defendants must have used the combination of mechanical devices that are covered therein. It is no infringement of the claim to use a different combination, even though such different combination of mechanical devices should produce exactly the same result as is produced by the combination of devices that is covered by said claim one of the plaintiff's patent."

27.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

823 "It is not only necessary to an infringement that the arrangement which infringes should perform the same services, or produce the same effect, but, it must be done in substantially the same way."

28.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The plaintiff's trunnions are cast solid with the treadle and oscillate with it. No other devices would constitute any mechanical equivalent of those trunnions unless they operated in substantially the same way. Stationary devices which did not oscillate at all would not be devices that operated in substantially the same way as the trunnions operate. If, therefore, the screw-bolts with their point centers, which were used by the defendant, were stationary and did not oscillate, the jury should not con-

sider them as the mechanical equivalents of the trunnions of the plaintiff's patent."

29.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"If the jury believe from the evidence that the screw-bolts with their point centers, which were used by the defendants, did not operate in substantially the same way as that in which the trunnions of the plaintiff's patent operated, their verdict should be for the defendant."

824 30.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The oscillating trunnions of the plaintiff's patent are devices which are placed in the patent between the treadle proper and the bearings which support the treadle. If the testimony shows that the screw-bolts upon which the treadle is supported in the defendant's machines are not placed between the treadle and the bearings on which it oscillates, and also believe that the said screw-bolts do not oscillate, then the jury should consider that the said screw-bolts are not the mechanical equivalents of the said trunnions, and their verdict should be for the defendant."

31.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"If one of the devices of the combination of said claim should be omitted and another device should be substituted therefore, and the operation of the substituted device should have an operation that was so far different from the operation of the device for which it was substituted as to give the entire combination a new and different action which was not performed by the combination of said first claim, then it would not continue to be the same combination as that covered by said first claim, but it would be a different combination, and would not be any infringement of said first
825 claim even though it should produce the same ultimate result of providing the bearings which would support the treadle and in which the treadle would be made to oscillate."

32.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The patentee declares in his specification that his invention 'consists in the construction and combination of parts' that are fully described and claimed in the specifications, including the drawings, which are a part of the specifications. The invention, therefore, includes not only the combination of parts but the construction of those parts as well."

33.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The particular construction which is specified in said first claim of the plaintiff's patent is a part of the claim and no combination of mechanical devices that has been used by the defendant would constitute any infringement of said first claim unless it contained not only substantially the same mechanical parts, but also substantially the same construction of those parts as that which is specified in said first claim."

34.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

826 "The following are matters of construction which are particularly specified in said first claim, viz:

"There must be holes through the lower extremities of the double vertical brace, and those holes must serve as bearings. Unless the defendants have used a double vertical brace which had holes through its lower extremities which were adapted to serve as bearings, it has not infringed the plaintiff's patent and the verdict should be for the defendant."

35.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"A further specific instruction which is called for by said first claim is a treadle provided with trunnions which are fitted to oscillate in the holes that are through the lower extremities of the vertical brace. Unless the defendant has used treadles which were provided with trunnions or some equivalent thereof, which trunnions or equivalents thereof were fitted to oscillate in holes that were in the lower extremities of the vertical brace, it has not infringed said first claim, and your verdict should be for the defendant upon the ground of non-infringement."

36.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"As a part of its testimony in this case, the defendant has introduced in evidence a United States patent which was granted

827 to it, as the assignee of Philip Diehl. This patent bears date October 14th, 1884, is numbered 306,469, and was granted for alleged new and useful improvements in sewing-machine stands and treadles. The evidence shows that the stands and treadles which the defendant has made and which are claimed to infringe the plaintiff's patent were made under and in accordance with the specifications and claims of this patent which is owned by the defendant."

37.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The jury are instructed that the defendant's patent is *prima facie* evidence that the alleged inventions which are covered by its claims were new and useful when they were made by said Philip Diehl, the plaintiff's assignor, and in this respect the defendant's patent is *prima facie* evidence for the defendant to the same extent as the plaintiff's patent is *prima facie* evidence for the plaintiff."

38.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The jury should remember that the plaintiff's patent does not cover or protect any invention except what is described in the patent and covered by its claims. It does not give to the plaintiff any equivalents of his invention. A patent that is of a pioneer character may cover mechanical equivalents of the devices that are
828 used in making up the combinations of its claims, but in such case the patent cannot cover mechanical equivalents, excepting only so far as they fall within the invention that is covered by the patent. If the introduction of mechanical equivalents do not change the character of the combination covered by the claim, the combination still remains the same, and is protected by the patent. But if the mechanical equivalents which are introduced change the character of the combination so that it is not the same combination that was made by the patentee, then the combination is no longer within the invention that is covered by the patent, and its use will not constitute any infringement of the patent. In no case whatever can a patent be extended so as to cover or protect in the patentee any equivalent of his invention. A mechanical equivalent that falls within the invention patented is one thing, but another invention which may be called an equivalent of the invention patented is another thing entirely, and the patent cannot be made to reach or cover it."

39.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The sewing-machine stands which have been made by the defendant, and which are claimed to infringe the plaintiff's patent, have been introduced in evidence and there is no dispute as to how they are constructed and used. Both sides to this case agree upon what the defendant has made and used and sold, and both
829 parties agree that the treadles made and used and sold by the defendant are those which are described in the said Diehl patent."

40.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"As to whether the sewing-machine stands which have been made, used and sold by the defendant are covered by the claims of the Diehl patent, or not, is an important question in the decision of this case. Because in so far as the claims of the said Diehl patent cover the construction or combination of mechanical devices shown therein, the said patent is *prima facie* evidence that such construction and combinations do not infringe upon any prior patent. The construction and combinations that are covered by the claims of the said Diehl patent constitute a decision of the Patent Office that the same were, when the patent was granted, both new and useful, and also that said Philip Diehl was the first and original inventor thereof."

41.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"If you find that Philip Diehl was the first and original inventor of the combinations of mechanical devices which are covered by the several claims of said Diehl patent, you must consider that the Diehl patent is *prima facie* evidence, that the same were never
830 invented by any prior patentee, whether such prior patentee was Herman Cramer or any one else."

42.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"No two different independent inventors can be the first inventor of the same invention. Unless they both make the same invention at the same time, one of them must make it before the other does. The said Diehl patent being later in date than the plaintiff's patent is evidence which tends to prove that the inventions covered by it were made after the plaintiff, Cramer, had completed the inventions which are described in or covered by his patent. Unless, therefore, the construction and combinations that are described in the Diehl patent are described in and covered by the claims of the plaintiff's patent, such construction and combinations as are covered by the Diehl patent do not constitute any infringement of the plaintiff's patent."

43.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The following are definitions which define the proper meaning of the word 'skill':

"Webster's Unabridged Dictionary defines 'skill' as—'1. Knowledge; understanding. 2. The familiar knowledge of any
831 art or science, united with readiness and dexterity in execution or performance, or in the application of the art or science to practical purposes; power to discern and execute; ability to perceive and perform; as, the skill of a mathematician, of a surveyor, of a physician or surgeon, of a mechanic or seaman.'

"The Century Dictionary defines 'skill' as—'1. The discriminat-

ing or reasoning faculty; the mind. 2. Practical knowledge and ability; power of action or execution; readiness and excellence in applying wisdom or science to practical ends; expertness; dexterity.'

"The Century Dictionary defines 'skilled' as—'1. Having skill; especially, having the knowledge and ability which come from experience; trained, versed; expert; adept; proficient. 2. Displaying or requiring skill; involving special knowledge or training; as, skilled labor.'

"The Standard Dictionary defines 'skill' as—'1. The familiar knowledge of any *science, art, or handicraft, with corresponding* readiness and dexterity in execution or performance, or in the application of science, art, or knowledge in general to practical purposes; practical efficiency; dexterity.'

"The Standard Dictionary defines 'skilled' as—Having or demanding skill, especially that obtained by long practical experience; expert; proficient; as a skilled workman; skilled labor.'"

44.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

832 "A patentable invention is a mental result. It must be new and shown to be of practical utility. Everything within the domain of the conception belongs to him who conceived it. The machine, process, or product is but its material reflex and embodiment. A new idea may be engrafted upon an old invention, be distinct from the conception which preceded it, and be an improvement. In such case it is patentable. The prior patentee cannot use it without the consent of the improver, and the latter cannot use the original invention without the consent of the former. But a mere carrying forward or new or more extended application of the original thought, a change only in form, proportions, or decree, the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means with better results, is not such invention as will sustain a patent. These rules apply alike, whether what preceded was covered by a patent or rested only in public knowledge and use. In neither case can there be any invasion of such domain and an appropriation of anything found there. In one case everything belongs to the prior patentee; in the other, to the public at large."

45.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"If the jury believe from the testimony that the method of placing two bearings of revolving and oscillating shafts upon a single metal casting was well known and in common use prior to

833 the plaintiff's alleged invention, and also believe that all of the advantages which resulted from such method of combination was well known to skilled mechanics generally, and also believe that the placing of the bearings of the treadle trunnions in the lower extremities of the double vertical brace was but the substitu-

tion of a well-known equivalent arrangement and combination for the methods of fixing treadles in sewing-machine stands which were already in public use, and well known, then the jury should conclude that the combination of the plaintiff's first claim was merely the substitution of mechanical equivalents for the means which were already in use for accomplishing the result of fixing the treadle in the sewing-machine stand in a convenient manner for operating the machine by conveying motion to its band wheel, and that such substitution did not involve invention."

46.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"To render a patent valid, the patentee must be the first inventor of what is covered by its claims and he must also be an original inventor thereof. Unless Herman Cramer was the first and original inventor of the combination covered by his said first claim, the claim is void and your verdict should be for the defendant."

47.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

834 "Upon the question of invention the court instructs you that invention as applied to a machine or an improvement thereof consists in the finding out and constructing or discovering, for the first time, something that was not before known."

48.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"It is settled by many decisions of the United States Supreme Court that the application of an old process or machine to a similar or analogous subject, with no change in the manner of application and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result had not before been contemplated."

49.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"It is settled law that a mere carrying forward or new or more extended application of the original thought, a change only in form, proportions or degree, the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means with better results, is not such invention as will support a patent."

835 50.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"Unless something, which was not already known to mechanics,

of combination and construction was learned, for the first time, by the alleged invention of the combination that is covered by the plaintiff's first claim, there could not have been any invention in the making of that combination, even though it might have differed somewhat in form from any prior combination."

51.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"Where a combination already exists of operating mechanical devices, it is not invention for any person to take one or more of those devices from the combination, and substitute for the device or devices so withdrawn, other devices which were in common use, for performing the same kind of services as the devices performed which were withdrawn from the combination, and in such case it makes no difference whether the substituted devices made the combination operate with more or less friction than the original combination operated or not."

52.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

836 "When a combination of mechanical devices is once made, the law conclusively presumes that skillful mechanics, from a knowledge of their business, know which among all the devices that are in common use for performing the respective services which each one of the several devices in the combination respectively perform, will be best adapted to the use in such combination, and no substitution of such known devices, or any of them, for the similar devices which were already in the combination, will be patentable; and any patent granted for any such substitution will be void."

53.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"If the jury believe from the evidence that prior to the time when Herman Cramer made his alleged invention it was a well-known and common practice to mount revolving and oscillating journals or shafts in two bearings, one of which bearings was at or near each respective end of such journal or shaft; and also believe that both of such bearings were rigidly attached to a single metal frame which carried both of such bearings and held them constantly in rigid alignment with each other, then the jury should conclude that there was not any invention in merely hanging the two ends of the treadle trunnions in the two lower extremities of the double vertical brace."

837 54.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"It could not constitute any invention to apply for the first time

in a sewing-machine stand a method of mounting the treadle in a single casting, if the same method of mounting revolving and oscillating shafts in a single casting was an old and well-known method, which, prior thereto, has been in common use for mounting revolving and oscillating shafts and journals and trunnions in single castings which were applied in mechanisms other than sewing-machine stands."

55.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"The application of an old device or machine to a similar or analogous subject, with no change in the manner of application, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of the result has not before been contemplated."

56.

The said circuit court erred in refusing to give to the jury the following instruction, requested by the defendant:

"Where a claim of a patent is for a combination of devices, it is not infringed by the use of all but one of the devices, and the
838 use of another device which does not perform the same functions as were performed by the omitted device, for where one combination is asserted to be an infringement of another, a device in one to be the equivalent of a device in the other must perform the same functions in substantially the same way."

57.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"In his drawings and description Cramer has shown knife-edge bearings for that purpose but any other form of bearings which would accomplish the same purpose in substantially the same way would be within the limits of the patent so far as that element is concerned. In other words, Cramer's invention did not consist in knife-edge bearings in and by themselves, but consists in combining the double vertical brace and treadle by means of or through the medium of trunnioned knife-edge bearings, or any mechanical equivalent thereof. At the time of Cramer's invention, knife-edge bearings and point-center bearings and other forms of bearings were old. Cramer selected the knife-edge form as the one which he considered best. The law required him to specify only one form, and having done that, he would be entitled to use any other form which would be a mechanical equivalent thereof, although that other form is not spoken of in his patent."

58.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"When the defendant attempts to overthrow the *prima*
839 *facie* case made out by the patent itself, he is required to produce evidence of such a character as will establish the fact beyond a doubt. Ordinarily, in civil cases a mere preponderance of evidence is all that is required to prove a particular fact. But in patent cases, where a defendant attempts to prove the invalidity of the plaintiff's patent, the rule is different. In such cases the defendant must prove the invalidity of the patent by evidence that is clear and convincing, and which establishes the fact beyond a doubt. It is not sufficient that he should merely raise a doubt in your minds. If he succeeds only in raising a doubt, then the point must be decided in favor of the validity of the patent. The *prima facie* evidence furnished by the patent itself is sufficient to establish the fact of invention, and overcomes a mere doubt that might arise in your minds as to the existence of invention in the particular mechanism for which the patent has been granted."

59.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"In this case the plaintiff has met this attack on his patent by producing evidence for the purpose of showing that his invention was actually made in June, 1880. He produced his own testimony and that of his daughter, Mrs. Abbott, and certain pasteboard models, for the purpose of showing that he finished and perfected his invention as early as the middle of June, in the year 1880. If
you believe this evidence, then you will find as a fact that
840 his invention was made at that time, to wit, in June, 1880, and in that event the making, using, and selling of the device in Chicago by George Bent or any other person in the latter part of 1880 and the early part of 1881, will not be an anticipation of the Cramer invention, nor will it have any effect whatever upon the validity of his patent."

60.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"What is an infringement? It is an infringement of a patent to make or sell, or use, without a legal permit, anything which forms the subject-matter or any claim or clause of a claim in a valid patent; for a patent conveys to the patentee the exclusive right to do each and all of these three things during the existence or life of the franchise."

61.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"To constitute an infringement, it is not necessary that the defendant should have copied the various elements of the plaintiff's combination exactly and precisely, in all of their details and proportions, and in the precise form shown in the plaintiff's patent, but

if the defendant has incorporated into its structure the substance and essence of the patented invention, so as to obtain substantially the same result by substantially the same means and mode of operation, then there will be an infringement, although the defendant may have varied from the mere form and proportion, shape or location of the elements of the combination."

841

62.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"In determining the question of infringement, you are not to determine similarities or differences merely by the names of things, but are to look at the machines or their several devices and elements in the light of what they do or what function they perform, and how they perform it, and to find that a thing is substantially the same as another if it performs substantially the same function in substantially the same way, and that things are substantially different when they perform different duties or in substantially a different way."

63.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"The inquiry on this question of infringement should be, whether the defendant's device is in substance and effect merely a colorable evasion of the plaintiff's contrivance, or whether it is a new and substantially different thing. If the defendant has taken the same general plan and applied it to the same purpose, and produced the same effect in substantially the same way, although it may have varied the form of construction of some of the elements, it will in contemplation of the patent law, be the same thing, and hence an infringement."

64.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

842 "If you determine that the Diehl structure is in some respects an improvement, but in others an infringement of Cramer's patent, the fact that the patent was issued to the defendant for the Diehl structure subsequent to Cramer's patent, will afford no protection to the defendant against the charge of infringement. It very frequently happens that after a patent is issued to one person another person may subsequently secure a patent as an improvement upon the first, but such subsequent patent affords no protection to the holder thereof against the charge of infringement of the first patent, if as a matter of fact there be an infringement."

65.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"To determine whether a subsequent patent is an infringement of a prior patent or of a claim of the prior patent, it is necessary to

compare the device or combination of the later patent with that of the prior patent or claim, and ascertain whether any element of the prior patent or claim has been appropriated or adopted in the subsequent patent."

66.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"Section 4921 of the Revised Statutes of the United States, as amended by the act of March 3, 1897, provides as follows:

843 "'In any suit or action brought for the infringement of any patent, there shall be no recovery of profits or damages for an infringement committed more than six years before the filing of the bill of complaint or the issuing of the writ in such suit or action, and this provision shall apply to existing causes of action.'

"That statute applies to this case. It appears that the present suit was commenced October 8, 1896. Under this statute, the period for which damages may be recovered by plaintiff, if your verdict shall be in his favor, would be for six years between October 8, 1890, and October 8, 1896."

67.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"On the question of damages, the plaintiff claims that by reason of using his patented device in sewing machines, he was enabled to sell, and did sell, sewing machines at an advance price of five dollars over and above what he sold the same machine for without his patented improvement, and that it cost him $1.50 to put the patented feature in each of the machines, -hereby enabling him to realize a *new* profit of $3.50 on each machine in which his patented feature was used. He further claims that the defendant has sold large numbers of machines containing a device in infringement of his claim 1, thereby depriving him of sales which he would otherwise have made. If you find these facts to be true, and that the plaintiff would have made the same number of sales of his own ma-

844 chines as those made by the defendant of its machines if the infringement had not intervened, and that the plaintiff was able to supply the demand therefor, and that the market value of the invention covered by claim 1 of the Cramer patent is $3.50 on each machine, then you will be justified in estimating the damages by multiplying the number of machines containing the Diehl structure sold by the defendant during the infringing period, by $3.50 and the amount so ascertained will be the measure of the plaintiff's damages, if you find that the patent is valid and has been infringed, and that the plaintiff is entitled to damages."

68.

The said circuit court erred in giving the following instruction in the course of the charge to the jury:

"The evidence as to the amount of damages claimed by the plaintiff is not very satisfactory, but it may be that the actual sales

made by the defendant in this district, of sewing machine containing the alleged infringing device, for the period named, could not have been ascertained without great labor and delay, and as a practical way of presenting this evidence the plaintiff has done all that could be reasonably expected, under the circumstances."

69.

The said circuit court erred in not instructing the jury that there had been no infringement by the defendant of the first claim of the patent sued upon.

Wherefore, the said plaintiff in error prays that the judg-
845 ment of the circuit court of the United States for the northern district of California, be reversed, and that the said circuit court be directed to grant a new trial of said cause.

CHAS. K. OFFIELD,
WHEATON & KALLOCH,
Attorneys for Plaintiff in Error.

(Endorsed:) Filed June 4th, 1900. Southard Hoffman, clerk.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
THE SINGER MANUFACTURING COMPANY, Defendant. } No. 12259.

Order Allowing Writ of Error.

Upon motion of I. M. Kalloch, Esq., attorney for defendant, and upon the filing of a petition by said defendant for writ of error, together with an assignment of errors, it is ordered that a writ of error to the United States circuit court of appeals for the ninth circuit be allowed as prayed in said petition, and that the amount of the bond to be given by said defendant upon said writ of
846 error be, and the same is hereby fixed at the sum of fifteen thousand dollars, and it is further ordered that upon the giving of such security, all further proceedings in this court be suspended and stayed until the determination of said writ of error by said circuit court of appeals.

Dated June 4, 1900.

WM. W. MORROW,
Judge of Circuit Court.

(Endorsed:) Filed and entered June 4th, 1900. Southard Hoffman, clerk.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
THE SINGER MANUFACTURING COMPANY, Defendant. } No. 12259.

Bond on Writ of Error.

Know all men by these presents, that we, O. T. Lemen and H. F. Blanchet, Jr., as sureties, are held and firmly bound unto Herman Cramer in the full and just sum of fifteen thousand dollars, to be paid to the said Herman Cramer, his attorneys, executors, administrators or assigns, for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, firmly by these presents.

847 Sealed with our seals and dated this seventh day of June, in the year of our Lord one thousand and nine hundred.

Whereas, lately at a session of the circuit court of the United States for the northern district of California, in a suit pending between Herman Cramer, plaintiff, and The Singer Manufacturing Company, defendant, a final judgment was had and entered in favor of said plaintiff, Herman Cramer, and against the said defendant, The Singer Manufacturing Company, for the sum of $12,456, together with costs; and

Whereas, the said defendant has obtained from said court a writ of error to reverse the judgment aforesaid, and a citation directed to the said Herman Cramer has been or is about to be issued, citing and admonishing him to be and appear at the city of San Francisco:

Now, the condition of the above obligation is such that if the said Singer Manufacturing Company shall prosecute its writ of error to effect and shall answer all damages and costs that may be awarded against it, if it shall fail to make its plea good, then the above obligation to be void; otherwise to remain in full force and virtue.

O. T. LEMEN. [SEAL.]
H. F. BLANCHET, JR. [SEAL.]

UNITED STATES OF AMERICA, } ss:
Northern District of California,

O. T. Lemen and H. F. Blanchet, Jr., being duly sworn, each for himself, deposes and says that he is a freeholder in said dis-

848 trict, and is worth the sum of fifteen thousand dollars, exclusive of property exempt from execution, and over and above all his debts and liabilities.

O. T. LEMEN.
H. F. BLANCHET, JR.

Subscribed and sworn to before me this 7th day of June, 1900.
[SEAL.] P. J. KENNEDY,
Notary Public in and for the City and County of San Francisco, State of California.

Form of within bond and sufficiency of securities approved this eighth day of June, 1900.

WM. W. MORROW,
Judge of Circuit Court.

(Endorsed:) Filed June 8, 1900. Southard Hoffman, clerk. By W. B. Beaizley, deputy clerk.

849 In the Circuit Court of the United States of the Ninth Judicial Circuit in and for the Northern District of California.

HERMAN CRAMER, Plaintiff,
vs.
THE SINGER MANUFACTURING COMPANY, Defendant. } No. 12259.

Clerk's Certificate to Transcript of Record.

I, Southard Hoffman, clerk of the circuit court of the United States of America, of the ninth judicial circuit, in and for the northern district of California, do hereby certify the foregoing eight hundred and twenty-five (825) written pages numbered from 1 to 825, inclusive, to be a full, true, and correct copy of the record and of the proceedings in the above and therein cause, as the same remain of record and on file in the office of the clerk of said court, and that the same constitute the return to the annexed writ of error.

I further certify that the cost of the foregoing return to writ of error is $523.10, and that said amount was paid by The Singer Manufacturing Company, the defendant above named.

850 In testimony whereof, I have hereunto set my hand and affixed the seal of said circuit court, this 24th day of August, A. D. 1900.

[SEAL.] SOUTHARD HOFFMAN,
Clerk of United States Circuit Court, Ninth Judicial Circuit, Northern District of California.

(Ten-cent U. S. int. rev. stamp. Canceled.)

Writ of Error.

UNITED STATES OF AMERICA, *ss:*

The President of the United States to the honorable the judges of the circuit court of the United States for the ninth circuit, northern district of California, Greeting:

Because, in the record and proceedings, as also in the rendition of the judgment of a plea which is in the said circuit court before you, or some of you, between The Singer Manufacturing Company,

a corporation, plaintiff in error, and Herman Cramer, defendant in error, a manifest error hath happened, to the great damage of the said The Singer Manufacturing Company, a corporation, plaintiff in error, as by its complaint appears.

We, being willing that error, if any hath been, should be duly corrected, and full and speedy justice done to the parties aforesaid in this behalf, do command you, if judgment be therein given, that then under your seal, distinctly and openly, you send the
851 record and proceedings aforesaid, with all things concerning the same, to the United States circuit court of appeals for the ninth circuit, together with this writ, so that you have the same at the city of San Francisco, in the State of California, on the 7th day of July next, in the said circuit court of appeals to be then and there held, that the record and proceedings aforesaid being inspected, the said circuit court of appeals may cause further to be done therein to correct that error, what of right, and according to the laws and customs of the United States, should be done.

Witness, the Honorable Melville W. Fuller, Chief Justice of the United States, the 8th day of June, in the year of our Lord one thousand nine hundred.

[SEAL.] SOUTHARD HOFFMAN,
Clerk of the Circuit Court of the United States for the Ninth Circuit, Northern District of California.

Allowed by:

WM. W. MORROW, *Judge.*

Service of within writ and receipt of a copy thereof is hereby admitted this ninth day of June, 1900.

JOHN H. MILLER,
Attorney for Plaintiff.

Return to Writ of Error.

The answer of the judges of the circuit court of the United States of the ninth judicial circuit in and for the northern district of California.

The record and all proceedings of the plaint whereof mention is within made, with all things touching the same, we certify under the seal of our said court, to the United States circuit court
852 of appeals for the ninth circuit, within mentioned at the day and place within contained, in a certain schedule to this writ annexed as within we are commanded.

By the court.

[SEAL.] SOUTHARD HOFFMAN, *Clerk.*

(Endorsed:) Original. No. 12,259. Circuit court of the United States, ninth circuit, northern district of California. Singer Manufacturing Company, plaintiff in error *vs.* Herman Cramer, defendant in error. Writ of error. Filed June 9, 1900. Southard Hoffman, clerk. By W. B. Beaizley, deputy clerk.

Citation.

UNITED STATES OF AMERICA, *ss:*

The President of the United States to Herman Cramer, Greeting:

You are hereby cited and admonished to be and appear at a United States circuit court of appeals, for the ninth circuit, to be holden at the city of San Francisco, in the State of California, on the 7th day of July next, pursuant to a writ of error filed in the clerk's office of the circuit court of the United States, ninth circuit, northern district of California, in a certain action numbered 12,259, wherein The Singer Manufacturing Company, a corporation, is, plaintiff in error, and you are defendant in error to show cause, if any there be, why the judgment rendered against the said plaintiff in error
853 as in the said writ of error mentioned, should not be corrected, and why speedy justice should not be done to the parties in that behalf.

Witness, the Honorable William W. Morrow, judge of the United States circuit court, ninth circuit, northern district of California, this ninth day of June, A. D. 1900.

WM. W. MORROW, *Judge.*

Service of the within citation and receipt of a copy thereof is hereby admitted this ninth day of June, 1900.

JOHN H. MILLER,
Attorney for Plaintiff.

(Endorsed:) Original. No. 12,259. Circuit court of the United States, ninth circuit, northern district of California. Singer Manufacturing Company, plaintiff in error *vs.* Herman Cramer, defendant in error. Citation. Filed June 9, 1900. Southard Hoffman, clerk. By W. B. Beaizley, deputy clerk.

(Endorsed:) No. 638. In the United States circuit court of appeals for the ninth circuit. The Singer Manufacturing Company, plaintiff in error, *vs.* Herman Cramer, defendant in error. Transcript of record. In error to the United States circuit court of the ninth judicial circuit, northern district of California. Filed September 1, 1900. F. D. Monckton, clerk.

854 In the United States Circuit Court of Appeals for the Ninth Circuit.

THE SINGER MANUFACTURING COMPANY, Plaintiff in Error,
vs.
HERMAN CRAMER, Defendant in Error.

Upon writ of error to the circuit court of the United States for the northern district of California.

Chas. K. Offield and Wheaton & Kalloch for plaintiff in error.
John H. Miller for defendant in error.

Before Gilbert and Ross, circuit judges, and Hawley, district judge.

GILBERT, *Circuit Judge:*

Herman Cramer, the defendant in error, brought an action at law against The Singer Manufacturing Company, the plaintiff in error, for an infringement of the first claim of letters patent number 271,426, of date January 30, 1883, for a new and improved sewing-machine treadle. The machines which were manufact-
855 ured by the Singer Manufacturing Company and which it was alleged infringed upon the Cramer patent were made under letters patent number 306,469 issued October 14, 1884, to Phillip Diehl for "sewing-machine stand and treadle." Claim 1 of the Cramer patent reads as follows: "The vertical double brace joining the legs of the two ends of a sewing machine, provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings, substantially as specified." The specification described the treadle as provided with two trunnions cast as a solid portion thereof and extending from its sides into loop-holes in the vertical double brace, the trunnions being sharpened to an edge or corner along their lower sides, and the lower end of the loop-holes being hollowed to an angle more obtuse than the edge of the trunnion to serve as bearings for the same and to permit the rocking motion common to treadles. The inventor proceeded to say: "I am aware that sewing-machine treadles have before been provided with V-shaped bearings, and I do not claim the same as my invention."

The case was tried before a jury who found for the defendant in error and assessed his damages at $12,456. Much of the discussion which is found in the voluminous briefs for the plaintiff in error pertains more properly to the merits of the controversy, the construction of the patent, and the weight of the evidence which was introduced before the jury, and would be more directly applicable
856 to the case if this were an equity suit and were here on appeal. It must be borne in mind that the case comes to us by writ of error to review a judgment rendered upon the verdict of a jury, which can be reviewed only according to the principles of the common law and in the particulars to which error is

assigned. Our attention must not be diverted from the questions whether the trial court erred in its rulings upon the evidence or in giving or refusing instructions to the jury or in refusing to take the case from the jury upon the ground which was stated in the motion therefor.

One of the assignments of error principally relied on by the plaintiff in error is that the court refused to give a peremptory instruction to the jury at the close of the evidence to find for the defendant. This instruction was asked upon the ground that "no infringement had been shown." Whether or not it was error to refuse the instruction depends upon whether there was any evidence whatever of infringement, which if credited by the jury would have justified their verdict. It is contended on behalf of the plaintiff in error that the claim of the patent which is sued upon calls for a combination of elements, all of which were old, and that the court could plainly see from an inspection of the Diehl patent that it omitted substantial features of the patent upon which the action was brought. We find in the record evidence which went to the jury tending to show that the essential and important feature of claim one of the Cramer patent was the location of the treadle supports in the vertical cross-brace which connected the legs or side pieces of the machine, and that such location
857 in the cross-brace was new with the Cramer invention. There was also evidence tending to show that by so locating the treadle a better alignment of the treadle could be kept and maintained, and that the tendency of the machine in operation to loosen the joints which hold its legs in position, thereby displacing the treadle, was overcome. The evidence was that theretofore the treadle had been mounted in the legs or side pieces of the machine, or on a cross-rod connecting the legs, but never before had been inserted in the vertical cross-brace. In addition to other evidence of the utility of the plaintiff's invention, and of its novelty, was the evidence afforded by the admissions and declarations of the plaintiff in error. It was shown that shortly after obtaining his patent on February 8, 1883, Cramer submitted to that corporation the claims of his invention and endeavored to sell it his patent. In the following year Diehl, who was an employé of the Singer Company, obtained his patent upon his device, which also places the bearings of the treadle in the vertical cross-brace. The advantage of this construction of treadles under the Diehl patent was promptly published to the world by the Singer Company. Its catalogue, 1885, exhibits cuts of machines with the treadles hung in the vertical cross-brace, and thus refers to them: "The balance-wheel and treadle have their bearings entirely independent of the stand (or legs), thereby assuring a correct adjustment and easy action." This device prevents the "building" which so often follows a slight displacement of the supports of the machine, a diffi-
858 culty rarely appreciated, except by a skilled mechanic, which hitherto has been considered impossible to remedy. In another circular is shown a cut of a machine containing the treadle mounted in a vertical brace, accompanied with these words: "It

also shows the new (patented) and light-running stand, upon which all our family machines are mounted, with band wheel and treadle entirely supported within the brace, insuring accurate adjustment and ease of operation." In its catalogue of 1889 the company said: "These bearings being entirely within the brace, the adjustment is not affected by any strain which may be put upon the stand."

But it is contended that inasmuch as the claim of the Cramer patent is for a combination of elements, all of which were old, the patent is not entitled to the doctrine of equivalents, but must be confined to the form which is presented in the claim and specifications. It is urged that the Diehl patent presents material variations from those forms, so material as to avoid the charge of infringement. It is said that the Diehl patent uses point-center bearings instead of knife-edge bearings with trunnions which are essential features of the Cramer patent. The trunnions in the Cramer patent are projections upon the sides of the treadle in its axis, and their purpose is to afford the knife-edge bearings upon which the treadle turns. In the Diehl patent there are no such projections, the treadle at the point of axis turns upon point-centre bearings, that is to say, upon pointed screws which are inserted through holes
859 in the vertical cross-braces, and are set in holes countersunk in the treadle. There was evidence before the jury that these screws in the Diehl patent, upon which the treadle turned, were the mechanical equivalents of the knife-edged bearings and trunnions of the Cramer patent, and that by inserting the screws through the cross-brace in the Diehl device the same result was secured by a reverse method that was secured in the Cramer device. If the evidence was true that Cramer was the first to present a new and useful combination by mounting his treadle in the vertical cross-brace, thereby obtaining the advantages which some of the witnesses testified to, he was undoubtedly entitled to the protection of that combination and to the exclusive right to mount a treadle in the cross-brace, no matter what the form of the bearings of the treadle might be. This view is fully sustained by the general doctrine of the decisions. Winans *vs.* Denmead, 15 How. 330; Ives *vs.* Hamilton, 92 U. S. 426; Machine Co. *vs.* Murphy, 97 U. S. 120; Hoyt *vs.* Horn, 145 U. S. 308.

It is earnestly contended that inasmuch as the claim of the Cramer patent calls for a "treadle provided with trunnions," that the trunnions are made an essential feature of the construction of the treadle, and that there can be no infringement by the use of a treadle which has no trunnions. We do not think, however, that the court should have taken the case from the jury upon that ground. In order to mount the Cramer treadle in the vertical cross-brace upon knife-edged bearings, it was absolutely necessary
860 that it be provided with trunnions or the equivalent thereof. The trunnions in this case are the knife-edges of the bearings, no more and no less. There could be no such bearings without the projections by whatever name they may be called. If the patentee was entitled to the doctrine of mechanical equivalents and to the protection of the right to mount his treadle in the vertical cross-

brace with bearings, whether knife-edged or point-centre, his right certainly is not affected or diminished by the use of the words "provided with trunnions," as found in his claim, provided that the jury found, as they may have done from the evidence, that the one element of his combination, which consisted in mounting the treadle in the cross-brace, was new, and that the bearings used in the Diehl patent were the mechanical equivalent of his bearings.

It is contended that the court erred in excluding certain evidence which was offered concerning the alleged complicity of the Singer Company with a prior action prosecuted by the defendant in error against an agent of the company. That action had been brought in the circuit court for the northern district of California by the defendant in error against the company and Willis B. Fry, its agent. The Singer Company made a special appearance for the purpose of challenging the jurisdiction on the ground that it was a corporation of another State and could not, without its consent, be sued within the jurisdiction of the northern district of California. Upon that ground it obtained an order dismissing it from the action without prejudice to the
861 right of Cramer to bring a future action against it for the same cause. The action was thereafter prosecuted against Fry alone, and a judgment was rendered in his favor on the ground of non-infringement. When the present — was subsequently begun against the Singer Company it pleaded the judgment which was rendered for the defendant in the action against Fry as "*res judicata*," contending that it could avail itself of that judgment for the reason that it had employed counsel to defend the action against Fry and had defrayed the expenses of his defense. That plea was sustained in the circuit court, but upon writ of error from this court the judgment was reversed upon the ground that the evidence failed to show that the connection of the Singer Company with the defense of the action against Fry was open and known to the opposite party. Cramer *vs.* Singer Mfg. Co., 93 Fed. 636. The case was thereupon remanded for a new trial. Upon the new trial which resulted in the judgment which is now sought to be reviewed, the plaintiff in error introduced certain testimony which, according to its contention, tended to show knowledge upon the part of the defendant in error or his counsel of the fact that the plaintiff in error had defrayed the expenses of the litigation upon the part of the defendant Fry. One of the attorneys for Fry testified that pending the litigation of that cause one of the attorneys for Cramer remarked to him that he did not expect to make anything out of Fry for the reason that the latter was the Singer Manufacturing Company's agent, but that he expected to recover a judg-
862 ment in that action before the jury and that he would make that judgment the basis of proceedings for the purpose of getting an injunction against the Singer Company and that he also remarked that counsel for Fry ought to be well paid by the Singer Company for the services which they were rendering in that action in defending it, and that Cramer was present and also remarked that they ought to be well paid by the Singer Company for their

services. Upon motion of the defendant in error all of this testimony was struck out except that concerning the remark made by Cramer himself. Evidence was also offered from the record of testimony in the case of Cramer *vs.* Fry, in which it appeared that counsel for Cramer had offered in evidence a page from one of the pamphlets of the Singer Company describing the advantages of the machine which the company was selling and alleged that it set forth advantages that "the company" was claiming for that particular form of treadle. The plaintiff in error also offered in evidence the letter from the defendant in error to the Singer Manufacturing Company of date February 8, 1883, directing the company's attention to the advantages of his patent. This was offered upon the theory that because it was introduced in evidence in the case of Cramer *vs.* Fry it must be inferred that Cramer's counsel knew that that case was being defended by the Singer Manufacturing Company. We find no error in the exclusion of any of this testimony. None of it tended in the remotest degree to prove knowledge on the part of counsel for the defendant in error of the fact that the Singer Company was

863 in any way connected with the defense of the case against Fry. There was no offer to prove that any fact was ever communicated to the defendant in error or his counsel or that anything came to their notice from which such knowledge might be imputed. If indeed counsel for the defendant in error supposed that the plaintiff in error intended to pay for the services of Fry's attorneys it was, so far as the record informs us, the merest conjecture on their part. The suggestion that the company ought to pay for those services is wholly consistent with an entire absence of knowledge upon that subject. To the suggestion so made, so far as the evidence shows, there was no response, no information was offered. The fact that counsel for Cramer intended to use their judgment in case they obtained one as the basis of an injunction against the company indicates if anything that they believed the company would not be liable as a judgment debtor upon such judgment. The open dismissal of the Singer Company from that suit upon its own motion was significant of its withdrawal from the litigation and of its purpose not to be bound by the judgment to be rendered therein. Why should that company have taken the pains to assert its right to be dismissed as a party defendant to that action if it did not intend thereby to place itself in a position where it could not be affected by the judgment? Its dismissal from the action was wholly inconsistent with an intention to be identified with Fry as a defendant or to be bound by the judgment. The judgment entry dismissing it expressly reserved the right of the plaintiff in that

864 action to again sue the corporation upon the same cause of action. Both the dismissal and the reservation of that right were empty and idle acts if the corporation intended to maintain such connection with the action as to be concluded by a judgment therein. As against the overt declaration of its attitude to that litigation the evidence of its continued connection with the defense must needs be definite and certain and must not rest in suspicion or

conjecture. The evidence which was offered and which was excluded by the court did not tend to sustain the conclusion that Cramer or his counsel had knowledge that the Singer Company was, after its withdrawal from the action, identified with the defense.

The point is made that in his original application for a patent, filed in May, 1882, the defendant in error designated his invention a mechanism to form a "noiseless self-adjusting treadle," and that he made no allusion to the feature thereof which is now deemed of prime importance until his specification was subsequently so amended by his attorneys as to contain the declaration that his invention had for one of its objects to provide means "to keep the treadle bearings rigidly in line and at a fixed distance apart to avoid friction." It is argued from this circumstance that the court must construe the invention of the defendant in error to be a mechanism to secure a noiseless self-adjusting treadle and nothing more. We find in the record no assignment of error to which this contention of the plaintiff in error relates, but, conceding that it is
865 pertinent to the questions which are before us, we are unable to assent to the doctrine that an inventor is thus circumscribed by the words which he may first use to describe the advantages of his invention and that he may not afterwards on further consideration, either upon his own suggestion or that of his counsel, amend his specification so as to assert and maintain all the advantages which his device possesses. The file-wrapper, it is true, may be resorted to to determine what changes have been made in the description and claims while the application was pending, or to define the nature of the invention, or to ascertain what limitations and provisos have been imposed thereon by the inventor, but the changes which are relied upon by the plaintiff in error in this instance were not charges or limitations as to either description or claim. The claim throughout is substantially the same. It is the location of the treadle in the vertical cross-brace with the accompanying mechanism for its oscillation. That claim has not been departed from or limited. The final amendment simply directed attention to advantages which it possessed in addition to those first mentioned, only for the purpose of offering additional proof of invention. The patent when it was issued contained the claims and specifications by which it must be construed and by which the rights of the patentee must be measured.

Error is assigned to the refusal of the court to charge the jury that a witness false in one particular of his testimony is to be
866 distrusted in others. It is contended that that instruction was properly applicable to certain testimony of the defendant in error. It was shown that upon the trial of the former action of Cramer *vs.* Fry in 1895, the defendant in error did not carry his invention back of the year 1882, whereas in the present case he places the date thereof as early as 1880, and it was argued that the testimony in the present case must therefore be false. It was said also that the testimony of the witnesses of the plaintiff in error concerning the date at which machines containing the Diehl patent were offered for sale conclusively impeached the testimony of the

defendant in error upon the same subject. The rule is that the jury may reject the whole of the testimony of a witness who has wilfully sworn falsely as to a material point. In People *vs.* Strong, 30 Cal., 155, it was said that the rule did not apply to mistakes which were the result of error in accuracy or embarrassment without any real intention to misrepresent or deceive. The vice of the charge as requested is that it left out the two essential elements that the false testimony must have been wilfully false and must have referred to material matter. There was no error therefore in denying it. People *vs.* Sprague, 53 Cal., 494; People *vs.* Soto, 59 Cal., 369; People *vs.* Plyler, 121 Cal., 163.

Several of the assignments of error are directed to the instructions given by the court to the jury upon the subject of damages. There was testimony to the effect that the defendant in error in the years 1881–'82–'83–'84 sold sewing machines containing claim 1 of his invention, and that the cost of putting the same into each
867 machine was $1.50 and that his net profit on each machine sold containing claim 1 was $3.50, and that when the plaintiff in error put upon the market a machine which contained the infringing device, and sold the same at a lower price than that at which the defendant in error had sold, the business of the latter was injured and he was compelled to withdraw from the field. The court instructed the jury as follows: "The evidence as to the amount of damages claimed by plaintiff is not very satisfactory, but it may be that the actual sales made by the defendant in this district of sewing machines containing the alleged infringing device for the period named could not have been ascertained without great labor and delay and as a practical way of presenting this evidence the plaintiff has done all that could be reasonably expected under the circumstances." That which defendant did to show the extent of the infringement was to call upon the plaintiff in error to disclose the number of machines it had sold within the district under the Diehl patent. For this purpose the agent of the Singer Company was called as a witness. It was then agreed between the parties that in view of the difficulty of ascertaining the exact number of such machines sold, the agent might estimate the same. He estimated the number at 12,456. The jury in assessing the damages apparently allowed $1.00 for each machine sold. We do not see that the instruction above quoted or any of the instructions given by the court concerning the question of damages was erroneous or that the court erred in refusing to give instructions asked for by the plaintiff in error.
868 The defendant in error had a monopoly of his own invention. He had not sold the right to any other to manufacture or to vend the same. He had fixed a price of $5.00 extra for each machine containing his treadle, or a net royalty of $3.50. He testified that he was able and ready to supply the demand for his improvement and that his market was destroyed by the action of the plaintiff in error. Concerning the damages sustained by a patentee from infringement, Walker in his work on patents, sec. 563, says: "If he maintains a close monopoly and is ready and able to furnish the

whole market with the patented articles he must prove by satisfactory evidence the advantages gained by the infringer in the unlawful use of the patent over and above the advantages which he could have derived from the use of similar articles unpatented and open to the use of the public; or must prove the loss or falling off of his own sales in consequence of the infringement or a loss by the compulsory reduction of prices made necessary by the competition of the infringer. The rule varies with the special circumstances of the particular case," citing Seymour *vs.* McCormick, 16 How. 480; Philip *vs.* Nock, 17 Wall. 460; and Birdsall *vs.* Coolidge, 93 U. S. 64.

The plaintiff in error contends further that there is no evidence to sustain a verdict for more than nominal damages; and that the record shows affirmatively that the defendant in error sustained no injury by reason of the acts of the plaintiff in error; that by his own statement the defendant in error ceased selling machines
869 containing his brace and treadle in the year 1884, and that the testimony shows conclusively that the plaintiff in error placed no machines upon the market containing the Diehl patent before the year 1886. We find in the evidence that the defendant in error in his testimony fixed no precise time at which he ceased selling his invention. He testified that he sold it from 1881 up to about 1884, "or somewhere along there," "until they came up with theirs." Elsewhere he testifies to the same purport that he did not retire from the field until the machines containing the Diehl patent were placed upon the market. In view of all the evidence in the record, we find no warrant for saying that no testimony whatever went to the jury to sustain the conclusion that the defendant in error ceased manufacturing and selling his brace and treadle on account of the competition induced through the manufacture and sale of machines containing the Diehl treadle.

There are numerous additional assignments of error which we have carefully considered, but do not deem it necessary to discuss further than to say that in none of them do we find error for which the judgment should be reversed.

The judgment will therefore be affirmed.

(Endorsed:) Opinion. Filed May 13, 1901. F. D. Monckton, clerk.

870 United States Circuit Court of Appeals for the Ninth Circuit.

THE SINGER MANUFACTURING COMPANY, Plaintiff in Error,
v.
HERMAN CRAMER, Defendant in Error.
} No. 638. Judgment.

In error to the circuit court of the United States for the northern district of California.

This cause came on to be heard on the transcript of the record from the circuit court of the United States for the northern district of California, and was argued by counsel.

On consideration whereof, it is now here ordered and adjudged by this court, that the judgment of the said circuit court in this cause be, and the same is hereby, affirmed, with costs.

(Endorsed:) Judgment. Filed and entered May 13, 1901. F. D. Monckton, clerk.

871 At a stated term, to wit: the October term A. D. 1901 of the United States circuit court of appeals for the ninth circuit, held at the court-room, in the city and county of San Francisco, on Friday, the 15th day of November, in the year of our Lord one thousand, nine hundred and one.

Present: The Honorable William B. Gilbert, circuit judge: Honorable William W. Morrow, circuit judge; Honorable Thomas P. Hawley, district judge.

THE SINGER MANUFACTURING COMPANY, Plaintiff in Error,
v.
HERMAN CRAMER, Defendant in Error. } No. 638.

It is ordered that the petition for a rehearing heretofore filed in the above-entitled cause be, and the same is hereby, denied.

872 United States Circuit Court of Appeals for the Ninth Circuit.

THE SINGER MANUFACTURING COMPANY, Plaintiff in Error,
v.
HERMAN CRAMER, Defendant in Error. } No. 638.

Certificate of Clerk C. C. A. to Transcript.

I, Frank D. Monckton, clerk of the United States circuit court of appeals for the ninth circuit, do hereby certify the foregoing eight hundred and seventy-one (871) pages, numbered from one (1) to eight hundred and seventy-one (871), inclusive, comprised in the preceding two (2) volumes, numbered one (1) and two (2) respectively, to be a true copy of the entire record in the above-entitled case in said United States circuit court of appeals for the ninth circuit as the originals thereof remain and appear of record in my office.

(F. D. M., by M. S.)

Attest my hand and the seal of said United States circuit court of appeals for the ninth circuit at San Francisco, California, this 18th day of November, A. D. 1901.

[Seal United States Circuit Court of Appeals, Ninth Circuit.]

F. D. MONCKTON, *Clerk.*

873 UNITED STATES OF AMERICA, *ss*:

[Seal of the Supreme Court of the United States.]

The President of the United States of America to the honorable the judges of the United States circuit court of appeals for the ninth circuit, Greeting:

Being informed that there is now pending before you a suit in which The Singer Manufacturing Company is plaintiff in error and Herman Cramer is defendant in error which suit was removed into the said circuit court of appeals by virtue of a writ of error to the circuit court of the United States for the northern district of California, and we, being willing for certain reasons that the said cause and the record and proceedings therein should be certified by the said circuit court of appeals and removed into the Supreme
874 Court of the United States, do hereby command you that you send without delay to the said Supreme Court, as aforesaid, the record and proceedings in said cause, so that the said Supreme Court may act thereon as of right and according to law ought to be done.

Witness the Honorable Melville W. Fuller, Chief Justice of the United States, the 21st day of January, in the year of our Lord one thousand nine hundred and two.

JAMES H. McKENNEY,
Clerk of the Supreme Court of the United States.

875 [Endorsed:] File No. 18,360. Supreme Court of the United States. No. 507, October term, 1901. The Singer Manuf'g Company *vs.* Herman Cramer. Writ of certiorari. No. 638. U. S. circuit court of appeals, for the ninth circuit. Filed January 28, 1902. F. D. Monckton clerk U. S. circuit court of appeals for the ninth circuit.

876 United States Circuit Court of Appeals for the Ninth Circuit.

THE SINGER MANUFACTURING COMPANY, Plaintiff in Error,
v.
HERMAN CRAMER, Defendant in Error. } No. 638.

It is hereby stipulated and agreed by and between the litigants in the above-entitled cause represented respectively by their attorneys and counsel that the certified transcript of record now on file in the Supreme Court of the United States and upon which the petition for writ of certiorari was heard and the writ granted in said case may and can be taken as a return to said writ and that the clerk of the United States circuit court of appeals may send up a certified copy of this stipulation with his return.

WHEATON & KALLOCH AND
CHARLES K. OFFIELD,
Attorneys for Plaintiff in Error.
JOHN H. MILLER,
Attorney for Defendant in Error.

(Endorsed:) Stipulation as to return to writ of certiorari. Filed January 28th, 1902, F. D. Monckton, clerk.

877 United States Circuit Court of Appeals for the Ninth Circuit.

THE SINGER MANUFACTURING COMPANY, Plaintiff in Error,
v.
HERMAN CRAMER, Defendant in Error. } No. 638.

Certificate of Clerk C. C. A. to Stipulation.

I, Frank D. Monckton, clerk of the United States circuit court of appeals for the ninth circuit, do hereby certify the next preceding page to be a full, true and correct copy of a stipulation as to return to writ of certiorari filed in the above-entitled cause this 28th day of January, A. D. 1902, as the original thereof remains of record in my office.

Seal United States Circuit Court of Appeals, Ninth Circuit.

Attest my hand and the seal of said United States circuit court of appeals for the ninth circuit at San Francisco, California, this 28th day of January, A. D. 1902.

F. D. MONCKTON, *Clerk.*

878 United States Circuit Court of Appeals for the Ninth Circuit.

THE SINGER MANUFACTURING COMPANY, Plaintiff in Error,
v.
HERMAN CRAMER, Defendant in Error. } No. 638.

Return to Writ of Certiorari.

By direction of the honorable the judges of the United States circuit court of appeals for the ninth circuit, I, Frank D. Monckton, clerk of said court, in obedience to the foregoing writ of certiorari issued out of the honorable the Supreme Court of the United States and addressed to the honorable the judges of the United States circuit court of appeals for the ninth circuit, commanding them to transmit to the said Supreme Court the record and proceedings in the above-entitled cause, do attach to the said writ a certified copy of a stipulation entered into between the attorneys for the several parties in said cause, the original of which stipulation is of record in my office, and do certify the same as due return to said writ.

Seal United States Circuit Court of Appeals, Ninth Circuit.

In testimony whereof I have hereunto set my hand and affixed the seal of said United States circuit court of appeals for the ninth circuit at San Francisco, California, this 28th day of January, A. D. 1902.

F. D. MONCKTON, *Clerk.*

879 [Endorsed:] File No. 18,360. Supreme Court U. S. October term, 1902. Term No. 215. The Singer Manufacturing Co., petitioner, *vs.* Herman Cramer. Writ of certiorari and return. Filed Feb'y 10", 1902.

IN THE

Supreme Court of the United States.

OCTOBER TERM, A. D. 1901.

THE SINGER MANUFACTURING COMPANY, Petitioner,

vs.

HERMAN CRAMER, Respondent.

Petition for Writ of Certiorari, etc.

Petition for writ of certiorari to the United States Circuit Court of Appeals for the 9th Circuit, to require said court to certify to the Supreme Court of the United States for its review and determination the case of The Singer Manufacturing Company, plaintiff in error, *vs.* Herman Cramer, defendant in error.

To the Honorable the Supreme Court of the United States:

Your petitioner, the Singer Manufacturing Company, respectfully petitions this Honorable Court that the writ of certiorari may be granted, directing the Circuit Court of Appeals for the 9th Circuit to certify to this Honorable Court for its review and determination, the case of your petitioner, plaintiff in error, *vs.* Herman Cramer, defendant in error, and for reasons therefor respectfully shows to this Honorable Court as follows:

Statement of Facts.

First. Your petitioner is a corporation duly organized and existing under and by virtue of the laws of the State of New Jersey, and having its principal place of business in the City, County and State of New York; and that the defendant in error, Herman Cramer, is a citizen of the state of California and resident thereof.

Second. That the said Herman Cramer filed his complaint against your petitioner in the United States Circuit Court for the Northern District of California at the July term of court in the year of 1896, for an infringement of letters patent granted him under date of January 30, 1883, and numbered 271,426, for a new alleged useful improvement in sewing machine treadles, infringement being alleged only as to the first claim thereof (Record, pp. 1-5), but that in due order of pleading thereafter your petitioner filed a plea of the general issue to said complaint and gave notice in writing of the defenses to be urged in the trial of said case in compliance with the statutes in such case made and provided.

Third. That said case came on for trial on the 28th day of March, 1900, and upon the 20th day of April, 1900, a verdict and judgment was rendered against your petitioner and in favor of the defendant in error for the sum of $12,456 and costs. That a bill of exceptions was duly filed in said cause and a writ of error was allowed. The said writ of error being issued on the 8th day of June, 1900, and served upon the attorney of the defendant in error on the 9th of June, together with the citation, citing and admonishing the defendant in error to appear in the said Circuit Court of Appeals and show cause why the said judgment should not be corrected, and that under said writ of error, the said cause was properly brought

before the Circuit Court of Appeals for the 9th Circuit for review and determination; and that upon the 1st day of September, 1900, a certified transcript of the record and all proceedings of the said court in said case was filed in the Circuit Court of Appeals for the 9th Circuit and the said case was duly entered and docketed in said Circuit Court and entitled the said The Singer Manufacturing Company, complainant in error, *vs.* said Herman Cramer, defendant in error. A certified copy of the entire record of the case in the Circuit Court of Appeals is hereby furnished in conformity with Rule 37 of this Honorable Court relative to cases from Circuit Courts of Appeals, and the same is hereby referred to and marked and identified herewith and made a part of this petition. The said certified printed copy of said entire record of the proceedings in said Circuit Court, including the bill of exceptions, contains all the testimony that was taken upon trial of said case in said circuit. The assignment of errors that was filed by your petitioner contained in said bill of exceptions and they are shown and exhibited upon said pages 811 to 845, inclusive, and are hereby referred to and made part of this petition and application.

Fourth. That the said case came on to be heard in the said Circuit Court of Appeals upon the 5th day of March, 1901, before the Honorable Circuit Judges Gilbert and Ross and the Honorable District Judge Hawley, and upon the 13th day of May, 1901, the said Circuit Court of Appeals rendered a judgment affirming the said judgment of said Circuit Court; that said Circuit Court of Appeals filed an opinion and decision in writing, the closing paragraph of which contained an order that the judgment of the Circuit Court must be affirmed with costs; said opinion and decision are contained in the certified copy of the

record of the said Court of Appeals at pages 854 to 869, inclusive, and the same is hereby referred to and made a part of this petition. That shortly thereafter your petitioner filed a petition for rehearing, and that upon the 15th day of November, 1901, said petition was denied by the said Circuit Court of Appeals for the 9th Circuit, but the mandate in said case has been stayed until the 15th day of January, 1902, for your petitioner to file this, its petition for writ of certiorari.

Fifth. Your petitioner is advised and so believes that the said judgment and finding of the said Circuit Court of Appeals in the said cause in sustaining the judgment of the court at the Circuit; and the judgment of the court at the Circuit, are erroneous, without legal justification and contrary to all the rules, decisions and principles of law laid down by this Honorable Court and found upon the statute books applicable to such causes; and that this Honorable Court should require the said case to be certified to it for its review and determination under and in accordance with the sixth section of the act of Congress, entitled "An Act to Establish Circuit "Court of Appeals," and to define and regulate certain cases, the jurisdiction of the courts of the United States and for other purposes, approved March 3rd, 1891, the said case being made final in the Circuit Court of Appeals by said act, except for the interposition and rightful recognition by this Honorable Court as herein prayed.

Grounds and Gravamen of and for This Petition for Writ of Certiorari;—Aligned and Epitomized.

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(1) This petition should be granted because the exact and precise subject-matter contemplated by this petition, namely, the validity of the Cramer patent of January 30, 1883, No. 271,426, for an alleged improvement in sewing machine treadles, and the question of infringement thereof by petitioner, has been before three several Circuit Courts upon three separate trials in actions at law, before three several respective juries, and against petitioner's same mechanical devices in each suit, and the patent so construed in each case as to bar any finding, otherwise than of non-infringement.

In two of such cases, namely, the case of *Cramer* v. *Fry*, your petitioner's agent, tried before his Honor, Judge Joseph McKenna, and the case of Cramer against your petitioner, tried in the first instance before his Honor, Judge James H. Beatty, the patent was construed by the court, your petitioner's device found not to infringe, and the jury instructed to return a verdict for your petitioner.

In the trial of the above case against your petitioner the instruction of the court, Judge Beatty, to the jury to so find, was based primarily upon the proposition that your petitioner openly defended its agent Fry and was protected by the judgment, but your petitioner's motion before his Honor Judge Beatty to instruct the jury to find for your petitioner, was based not only upon the fact that your petitioner had defended its former agent, Willis B. Fry, in the action of the respondent, Cramer, against

him, but upon the same ground as appears by the instruction of Judge McKenna, namely, that your petitioner did not infringe; and his Honor Judge Beatty construed the patent as it was construed by Judge McKenna and independently of Judge McKenna's construction, and would have so instructed a verdict for petitioner in the case before him, if he had not ordered a verdict for your petitioner upon the ground just indicated—as appears by the following quotation from the records of the United States Official Reporter, Mr. Clement Bennett, now on file in said case, as follows:

"THE COURT: I take it from the evidence already "offered, that this is the same case tried before. My mind "is made up upon that. If the record does not show that, "you might be permitted to show it. But I have made up "my mind that this is the same case that was tried before. "I have looked over the old case, and think the patents "introduced there are the same as those introduced here. "The same evidence is introduced here that was intro- "duced before. I could not well determine that without "going over the whole evidence.

. . . . . .

"MR. WHEATON: The decision of Judge McKenna is "upon file, and I wish to put that in also.

"THE COURT: Yes, I think it is on file. I may sug- "gest that while I have decided this question simply on "what I deem to be the law applicable to it, uninfluenced "by that decision, yet if you went through with the trial "of the case and introduced all your evidence, I do not "see what I could do but to instruct the jury finally to "find a verdict for the defendant, and thus reach the "same conclusion we reach by the introduction of this "judgment roll."

The "judgment roll" here referred to by Judge Beatty being the judgment on verdict for your petitioner instructed by Judge McKenna upon the ground of non-infringement. (Record, p. 667.)

In the trial of the present case before his Honor Judge Morrow, his Honor Judge Morrow agreed with Judge McKenna that the Cramer patent in suit was a narrow patent, and with the views of his Honor Judge McKenna upon this proposition, the exact language of Judge Morrow to this effect being as follows:

"JUDGE MCKENNA IN THAT CASE HELD THAT THIS WAS "A NARROW PATENT. I CONCUR WITH HIS VIEWS UPON "THAT PROPOSITION." (Record, p. 740.)

Your petitioner respectfully submitting that it is the veriest travesty upon every rule of construction laid down by this Honorable Court as governing and interpreting letters patent to find that the Cramer patent in suit was a narrow patent, and so finding, to permit any question of infringement thereof to be submitted to any jury, the identification of the patent as a narrow one leaving no question of fact possible to go to the jury as against your petitioner's device proceeded against, being a device of the same precise character and construction present in each of the three cases and trials, your petitioner averring that in no other case or cases except the three separate trials in the United States Circuit Court for the Northern District of California before his Honor Judge McKenna, his Honor Judge Beatty, and his Honor Judge Morrow, has the validity of the Cramer patent been at issue or passed upon, or any question of infringement decided in relation thereto, excepting further, of course, this case in the Court of Appeals.

(2) The vast sums of money claimed to be due by the respondent Cramer of your petitioner by reason of this patent and the jury verdict in this case, and the peril to your petitioner's entire property, assets and business, under claims made by reason of this jury finding, would seem to make this petition worthy of consideration at the hands of this court upon this ground alone, as a matter of gravity and importance; certainly so to your petitioner.

The judgment in this case, it is true, is only for the sum of twelve thousand four hundred and fifty-six dollars. This judgment, as appears by the record, covers only asserted acts of infringement committed in the Northern District of California and within a certain prescribed time. Since the rendition of such judgment the respondent Cramer has brought five additional actions at law against your petitioner: One in the United States Circuit Court for the Northern District of California; one in the United States Circuit Court for the District of Washington; one in the United States Circuit Court for the District of Oregon; another in the United States Circuit Court for the Southern District of California; and still another in the United States Circuit Court for the Southern District of New York, confining the allegations of acts of infringement to the respective Districts. The aggregate amount of damages asked of your petitioner in these suits under this patent, closely approximating two millions of dollars, your petitioner averring that the declarations or complaints in these five suits, respectively, are printed in form and that the counsel for said respondent in all of these declarations or petitions openly threatens to bring separate and inde-

pendent suits in every District of the United States against your petitioner for damages for the infringement of said Cramer patent, confining each allegation of infringement as committed in each separate District, and to put your petitioner to trial of as many cases as there are Districts in the United States. Your petitioner averring that in each of the printed declarations or complaints so filed against your petitioner as aforesaid, there is contained the allegation and averment in substance and conclusion that in the above and pending case in which this petition for writ of certiorari is filed, all facts of the validity of the patent in suit have been adjudicated against your petitioner and all facts as to the infringement of said patent so adjudicated, and that there is nothing left but to assess the claimed damages against your petitioner as fixed and found by the jury in the action in which this petition is presented. And further, that said respondent Cramer in each of said declarations or complaints filed against your petitioner since the entry of the judgment verdict in this case asks and demands three times the amount of the damages found by the respective juries, besides the costs of the respective suits, plainly amounting, if such demands are recognized and enforced, to a sum equal to many millions of dollars, a substantial proportion of the entire property assets of your petitioner.

(3) **Your petitioner further respectfully submits that this petition should be allowed because manifestly and plainly upon a study and examination of the Cramer patent in suit and upon the face of the patent itself and the first claim thereof alleged alone to be infringed by your petitioner, and a comparison of this patent with the combined cross-bar, vertical brace, loop and treadle casting and ar-**

rangement of your petitioner as shown by the Diehl patent; there cannot be possibly found or exist any infringement by your petitioner of the first claim of this patent.

Your petitioner takes it that this Cramer patent is directed to the sewing machine manufacturing industry and must be intended to be understood by those carrying on that industry. The statement and terms of the patent are perfectly plain and apparently easy to understand, and your petitioner understands and believes that every other sewing machine manufacturer in the United States would so understand and nothing otherwise than that this Cramer patent related to a particular and peculiar mechanical construction and arrangement of treadle and alliance therewith through certain peculiarities of formation, with holes in the lower depending ends of the cross-brace of the sewing machine to serve as bearings. Every sentence and line of the patent emphasizes and makes certain this fact and condition and the first claim points out with great particularity the specific construction and arrangement necessary to meet and conform with the statements in the specification part of the patent and illustrated in the drawings. There can certainly be found nothing to a sewing machine manufacturer to indicate that this Cramer patent or its patentee had any thought or idea, purpose or object, or considered the invention of his patent otherwise than a specific detail construction and arrangement of parts allied together as set forth in the specification and particularized and pointed out and made certain in the claims, and as so identified in this Cramer patent. There is found totally absent in your petitioner's sewing machine construction every element or part, both as to function and result, going to

make up the first claim of the Cramer patent, there being absent from your petitioner's device any holes or openings whatever through the lower end of your petitioner's cross-brace to serve as bearings for any purpose, there being totally absent from your petitioner's device any treadle provided with any trunnions whatever, and there being wholly absent from your petitioner's device any treadle of any description fitted to oscillate in any bearings whatever, except your petitioner's screw-point centers in your petitioner's treadle itself, your petitioner's treadle being as a matter of fact hung in offsets in the old common cross-bar and such cross-bar, then united as a single casting with the old common double vertical brace.

The Cramer patent in suit is found as "Exhibit A" upon Record, pp. 63, 64; and the Diehl patent, admittedly representing petitioner's machine in all three of the separate trials and cases, is found upon Record, pp. 166, 167, 168. The file-wrapper and contents of the Cramer patent being found upon pp. 365 to 376, inclusive, of the Record.

(4) Your petitioner further urgently submits and contends that this petition should be granted because the file-wrapper and contents of the respondent Cramer's patent so defines and limits this alleged invention of Cramer as set forth and elucidated in the opinion of his Honor Judge McKenna that there can be no possible construction given to this Cramer patent by reason of the statements and proceedings disclosed by the file-wrapper and contents, as to authorize or permit the finding that your petitioner's device infringes the first claim of said patent.

As to the matter just indicated your petitioner alleges

that he is informed by counsel supposedly learned as to such matters, and so believes, that the statements of the respondent Cramer and of his patent solicitors in the various proceedings in the Patent Office relating to his alleged invention before the grant of the patent and as a part thereof so identifies and defines and makes certain all there is or can be to this supposed Cramer device and invention, that so understanding the same there can be no possible contention that the device of your petitioner bears any relation to said first claim or can by any possible rightful construction put upon it infringe the same. Your petitioner cannot from any reading or understanding of the so-called file-wrapper and contents of the patent as appearing in said papers themselves and as set forth in the opinion of Judge McKenna, see or understand how any conclusion as to matters of equity, mechanical facts, and application, can be arrived at, otherwise than appears in the careful and extended decision of his Honor Judge McKenna, and by the concise statement of this fact and finding by his Honor Judge Beatty.

The decision of Judge McKenna, with the Cramer patent and specification printed therein in full and an illustration of defendant's machine alleged to infringe said patent, being found in the case of *Cramer* v. *Fry*, 68 F. R., 201-212, inclusive. The fact being in brief, as your petitioner understands and believes, that there is a direct conflict of opinion and finding as to the construction of respondent Cramer's patent between Judges McKenna, Beatty and Morrow at the Circuit, and Judges Gilbert, Ross and Hawley upon the Court of Appeals; two of said judges at the Circuit, Judges McKenna and Beatty, construing the patent and finding that under such construction there can be no possible infringement; one of said judges, Judge Morrow, construing the patent as narrow

and then illogically and unjustifiably submitting the question of infringement to the jury, and three of said judges, Gilbert, Ross and Hawley upon the Court of Appeals, construing said patent as broad and basic and finding infringement thereof.

(5) The petition should be granted because the testimony shows that neither respondent Cramer nor his business suffered any damage or injury whatever, by reason of any act of asserted infringement of your petitioner; and that as a matter of fact in the sale of petitioner's sewing machines in the Northern District of California prior to and during the time the respondent Cramer claims he was damaged, such sale was of great advantage to said respondent Cramer and his alleged invention, if that invention was of the slightest practical value.

The testimony of the respondent Cramer and that of his only supporting witnesses, his son and daughter, shows that Cramer upon two occasions only had made castings of the treadle devices of his patent, the first set of such castings being four or five in number, being made in the year 1881 (Record, p. 160), the second set of such castings being made in the year 1883 (Record, 158); that Cramer himself never made sewing machines, and the only use he ever made of his invention or these castings was to take out the usual braces found in second-hand sewing machines of different manufacturers and to substitute therefor his patented braces (Record, p. 81 and p. 160); that he "got or charged five dollars more" for the second-hand machines in which he put his patented braces

and that he paid from five dollars up for such second-hand sewing machines; that he had used up all of his last set of castings and all of his castings by the year 1884 or 1885 (Record, 83); that he only sold altogether *"between twenty-five and forty machines"* with his patent brace. (Record, p. 151.) There is no proof in the record from any party to whom he ever sold any sewing machine with his patented brace thereon, nor was any such sewing machine produced at any of the trials. It is true that Cramer did swear that he continued to put in his patent brace until your petitioner came up into that part of the country and drove him out with their machines, which he now asserts is an infringement of his patent; but it is perfectly evident that this statement of Cramer was a mere bald conclusion and not a statement of fact and was made solely for its influence upon and to the jury. The undisputed facts show that between the years 1881 and 1885 Cramer by his own statement never had by his two acts or sets of castings, one at San Francisco and one at Sonora, more than thirty-five or forty of his patent treadles. As to the first set he swears he put them in and they were disposed of within a few weeks; as to the second set of castings there can be nothing more certain than that such castings were incorporated in second-hand machines through the years 1882, 1883 and 1884, and no other attempt was ever made by Cramer to utilize his invention; manifestly because there was no demand for such a device, and its utilization would have been impossible under any circumstances other than by the forced alliance by said respondent Cramer of his patented device with second-hand machines purchased by him, and whether or not he sold such machines for five dollars more than otherwise is based entirely upon his own statement twenty years after the event without the slightest corroboration from any

party ever purchasing or using any such second-hand revamped machine from him. The fact being that your petitioner never sold or had one of its sewing machines now claimed as an infringement in the State of California until nearly two years after Cramer had ceased or had put in the last of his patented braces. (Record, pp. 541-542.)

The fact being also that between the years 1881 and 1885 (the time when Cramer says he was putting in his forty cast braces in old machines) the Singer Company sold thousands of sewing machines in his county, with braces and treadles independent; and thus furnished a market for Cramer's brace if it was of any value.

(6) Your petitioner urges also that good ground exists for the granting of this petition because there is present two claims in the Cramer patent in suit, the first only alleged to be infringed, and admittedly by Cramer the asserted forty braces made and put in by him between 1881 and 1885 in second-hand sewing machines, contained the inventions of both claims, and there is no proof in this record to show that "the five dollars got or charged" by him for his brace so put in related to the mechanism of the first claim more than the mechanism of the second claim, thus leaving no guide or rule whatever for the jury verdict.

It certainly appears by the terms of the Cramer patent that a mechanism represented by the first claim would be practically worthless and unsalable unless supplemented by the mechanism of the second claim, because this mechanism "prevents the noise which would result were the "trunnions permitted to bounce and thump endwise when "the treadle is in motion." It is not contended that your

petitioner's sewing machine infringes this second claim, and by the admissions of the patent it would seem to follow that the devices of the first claim were worthless in a sewing machine without the controlling devices allied therewith pointed out in the patent in the second claim; and your petitioner therefore contends that there is absent from this record all proof as to any damage done the respondent Cramer or any rule of proof under which any damage could be assessed upon the evidence as submitted by the respondent himself as to this matter.

(7) Your petitioner respectfully submits that this petition should be granted and your petitioner relieved from this judgment and the incalculable damage that will follow from it, as above indicated, because the hanging of your petitioner's treadle upon point center screws in an off-set in the cross-bar of your petitioner's machine as combined with the band wheel loop and brace, as shown by the Diehl patent of October 14, 1894, No. 306,469, is a mere accident and incident of construction with no other object or purpose than to utilize a unit, concrete, casting structure, carrying the treadle and band-wheel, and assuring a desired alignment and fixed relation between these moving parts.

The undisputed testimony in this case shows that up to a certain time, namely, about the year 1886 or 1887, as to its sewing machines sold in California, your petitioner hung the treadle in the usual way in the legs of the sewing machine, and in the manner substantially shown in its present construction upon point center screws; that some time before the date last given one of its foremen in its manufacturing department, Mr. Philip Diehl, made

the invention represented by the Diehl patent above and placed it thereafter in the sewing machine stands of your petitioner, contending that his invention was one largely belonging to the art of the casting of iron, and that it had for its object, as a matter of fact, and as shown by the patent and repeatedly stated therein, to provide a casting for containing and supporting both the band-wheel and treadle, so that when the band-wheel with its driving crank and the treadle have been hung within this casting and connected by a suitable pitman, their adjustment to, and relationship with, each other, are practically permanently secured, your petitioner respectfully submitting that such construction does not and cannot bear any relation to the mechanical device of the Cramer patent in suit, either as to the objects of the device itself or the described and patented means for carrying out such object.

(8) The petition should be granted because the alleged invention of the respondent Cramer, as claimed by himself, namely, the hanging of sewing machine treadle in the cross-brace, is without any practical value, advantage or utility, and is so shown by the testimony.

The testimony of the respondent Cramer in this case and of all the witnesses, shows that aside from your petitioner, with one or two minor exceptions, all of the principal sewing machine manufacturers of the United States hang their treadle independent of the cross-brace and usually at the lower ends thereof directly in or upon the legs of the sewing machine, and that this is the preferred mechanical arrangement for so doing and has been for a third of a century past, and that such location of the treadle is the most satisfactory and practical mechanical

construction and arrangement shown. The respondent Cramer admitted the main fact upon the stand (Record, pp. 163-164), and the principal representatives of the different manufacturers of the United States so testified (Record, pp. 502, 547, 565), and as entirely confirmatory of the truth of this statement, your petitioner states that since the expiration of the Cramer patent some two years ago none of the sewing machine manufacturers of the United States have altered or changed the manner of hanging their treadle in or upon the legs of the sewing machine in the slightest respect.

(9) This petition for writ of certiorari should be granted because the defense by your petitioner of its agent Fry, in the Cramer-Fry suit, tried before and decided by his Honor Judge McKenna by an instruction to the jury to find for the defendant upon the ground of non-infringement—was an open defense made by your petitioner wherein your petitioner paid all costs of such litigation and counsel fees, and such facts were known by respondent Cramer's counsel in that case, as appears by positive proof shown and offered in this case.

As we have above shown, his Honor Judge Beatty upon the first trial of this case against your petitioner instructed the jury to find for your petitioner upon the ground primarily that your petitioner was back of and defended its agent Fry, and the patent being the same and the alleged infringement being the same in that case as in the case against Fry, the matter was *res adjudicata* as to your petitioner. The Court of Appeals, however, for the Ninth

Circuit reversed this finding because in their opinion it was not shown that the defense by your petitioner of its agent Fry was an open defense and known to respondent Cramer. Thereupon your petitioner filed its petition for writ of certiorari from this decision directed to this Honorable Court to the October Term, 1898, upon the ground that upon the record as made and then present, the fact was disclosed and made clear that your petitioner defended its agent Fry openly to the knowledge of the respondent Cramer—but the petition was denied by this Honorable Court without opinion given therefor, but as your petitioner understands upon the point made by respondent's counsel in submitted brief, that only judgments in Circuit Courts of Appeal can be reviewed in this court by writ of certiorari when such judgments are final, within the meaning and intent of Section 6 of the Act authorizing the granting of writs of certiorari, and that the decision of the Circuit Court of Appeals simply upon this point was not final and only in effect remanded the case for a new trial. Your petitioner respectfully states and represents, however, that it not only appears in this case that your petitioner openly defended its agent Fry and paid all the costs and expenses of such defense and special counsel and experts in the making thereof, but that such defense was known to respondent Cramer's counsel at that time, your petitioner offering directly and positively to so prove under the sustained objection thereto of respondent Cramer's counsel.

Your petitioner further and finally respectfully submits that all of the grounds, reasons and matters asserted and appearing herein for the granting of this petition are duly authorized, raised and presented by the bill of exceptions, assignment of errors, etc., in due and proper order and

place, as appears by a certified copy of the record of the entire case and proceedings here present, and as your petitioner understands will be more carefully and succintly pointed out in an accompanying brief by petitioner's counsel filed herein and herewith; that your petitioner has not understood that it would be expected in this petition for your petitioner to state all of the facts and propositions in detail that will be relied upon in support of this petition if granted, and that your petitioner has therefore only stated the salient points, positions, reasons and facts upon which this petition is based and founded.

Wherefore, your petitioner respectfully prays and petitions that a writ of certiorari may be issued out of and under the seal of this court, directed to the United States Circuit Court of Appeals for the 9th Circuit, commanding said court to certify and send to this court on a certain day to be therein designated, a full and complete transcript of the record and all proceedings of the said Court of Appeals in the case therein entitled The Singer Manufacturing Company, plaintiff in error, vs. Herman Cramer, defendant in error, No. 638, as identified by the transcript of the record, and to cease and withhold any further action or order in said case until the further order of this court, to the end that the case may be reviewed and determined by this court as provided by Section 6 of the Act of Congress, entitled "An Act to establish Circuit Courts of Ap- "peals and to define and regulate in certain cases the juris- "diction of the courts of the United States and for other "purposes." Approved March 3rd, 1891; and that your petitioner may have such other and further relief or remedy in the premises as to this court may seem appropriate and in conformity with said act, and that the judgment and finding of said Circuit Court of Appeals in this

case and every part thereof may be reversed by this Honorable Court.

And your petitioner will ever pray, etc.

THE SINGER MANUFACTURING COMPANY,
By FREDERICK G. BOURNE,
President.

CHARLES K. OFFIELD,
MILTON A. WHEATON,
Counsel for Petitioner.

UNITED STATES OF AMERICA,
SOUTHERN DISTRICT OF NEW YORK. } ss.

FREDERICK G. BOURNE, being first duly sworn, states that he is president of the above named petitioner, The Singer Manufacturing Company, and as such president has full knowledge of its business affairs and particular knowledge of the matters and things set forth in the above petition and of the conduct and proceedings in the above-entitled action; that he has read the foregoing petition subscribed by him and knows the contents thereof, and that the facts therein stated are true, except as stated upon information and belief, and as to such statements he believes the same to be true.

FREDERICK G. BOURNE.

Subscribed and sworn to before me this
23d day of December, A. D. 1901.

Edward E Black
Notary Public.

I hereby certify that I have examined the foregoing petition and that in my opinion the petition is well founded as to matters of fact and as to matters of law, and that the case identified thereby is one, and is such, that the prayer of the petition should be granted by this Honorable Court.

CHARLES K. OFFIELD.

IN THE

Supreme Court of the United States.

OCTOBER TERM, A. D. 1901.

THE SINGER MANUFACTURING COMPANY, Petitioner,
vs.
HERMAN CRAMER, Respondent.

Petition for Writ of Certiorari to the United States Circuit Court of Appeals, for the Ninth Circuit.

BRIEF AND ARGUMENT FOR PETITIONER.

By CHARLES K. OFFIELD.

May it please the Court:

The petition for writ of *certiorari* asked of this court, and to be directed to the United States Circuit Court of Appeals for the Ninth Circuit, is founded on, and asked by, reason of certain facts and conditions appearing in and identified by the petition herewith filed, and is asked broadly upon the ground that the questions presented by the petition are of gravity and importance and that the granting of the petition is necessary to prevent a monstrous injustice to the petitioner, and in the interests of uniformity of decision, and in order that this court may correct a misapprehension of, and a seeming neglect by,

said Circuit Court of Appeals, of vital principles of law laid down by this court in the administration of justice, particularly as applied to patents and inventions and the litigation thereof in the federal courts.

We do not understand that it is either expected or desired by your Honors, that at this time, all of the reasons and grounds for the application for, or to justify the granting of this petition, should be amplified and set forth even approximately, to the extent that these matters should be presented at final hearing, if the petition should be granted; but that it is only expected and desired that such salient features and points should be called to the attention of the court that the court could see that it is such a case as would justify the granting of the writ as to matters of fact and the applied law thereto, and for this reason we shall briefly syllabus those points, which either singly or as an aggregation, will command the attention of your Honors and bring this petition under one or more of those broad rules of right that, from the decisions of your Honors as to these matters, would seem to justify this petition and its recognition and grant. In this brief we shall follow closely the division and classification of the subject appearing in the accompanying petition for writ of certiorari, in relation to which this paper is filed as a brief and argument in support thereof.

Point I.

The petition should be granted, because there has been such diverse construction of the respondent's patent by various federal judges in separate trials as would demand that a final settlement of its rightful construction and application, should be made by this court.

As appears by the record and petition and evidenced also by the judicial reports, there has been three separate trials at the circuit wherein the validity and scope of the respondent's patent was in question as against the same precise sewing machine and mechanism in each case of the petitioner, the Singer Manufacturing Company: The first of said cases being tried in the year 1895 in the Northern District of California, of respondent Cramer against the petitioner's agent, Willis B. Fry, and defended by petitioner, wherein a verdict was instructed by his Honor Judge McKenna for the defendant upon the ground of non-infringement. *Cramer* v. *Fry*, 68 Fed. Rep., 201. The second of said cases being the case at bar, tried before his Honor Judge Beatty, wherein his Honor, although deciding the case ostensibly upon the doctrine of *res adjudicata* as to your petitioner in the Fry case, as a matter of fact also construed the patent and found non-infringement thereof by your petitioner exactly as theretofore found by his Honor Judge McKenna, as appears by the petition filed herein and the extracts from the finding of Judge Beatty as to this matter. The third case or trial is the case here present, in which his Honor Judge Morrow construing the patent in suit found it to be a "narrow one," but nevertheless submitted the case to the jury upon the question of infringement; and as to this finding of Judge

Morrow, we respectfully submit that having so found, the error of submitting the case to the jury upon the question of infringement is too palpable and manifest to need extended comment, as the three judges constituting the Court of Appeals found it necessary to construe the patent, as fundamental and basic, before permitting the judgment to stand, as next follows.

In opposition to the construction placed by Judges McKenna, Beatty and Morrow upon the respondent Cramer's patent as above is the broad, far-reaching construction given to it by Judges Gilbert, Ross and Hawley constituting the Court of Appeals, wherein that court says: "If "the evidence was true that Cramer was the first to pre- "sent a new and useful combination by mounting his "treadle in the vertical cross-brace, thereby obtaining the "advantages which some of the witnesses testified to, he "was undoubtedly entitled to the protection of that com- "bination *and to the exclusive right to mount a treadle* "*in the cross-brace, no matter what the form of the bear-* "*ings of the treadle might be.*"

We have then here, as a matter of fact, the construction of three federal judges given to this patent, two of them, Judges McKenna and Beatty, construing the Cramer patent and finding that upon such construction that the patent is restricted and without extended scope, and there is no infringement, the one, Judge Morrow, construing the patent as a "narrow one," and by such construction undoubtedly taking defendant's structure out from under as an infringement of the first claim, and the construction of three judges, Gilbert, Ross and Hawley, holding the patent to be a basic and pioneer one and to be so wide and comprehensive as to give the patentee the exclusive right to mount a treadle in a "cross-brace," no matter what the

form of the bearings of the treadle might be, the cross-brace even not having to be a vertical cross-brace as made certain by the claims of the patent.

We respectfully submit that, where there is such a wide and diverse construction of a patent among the federal judges, upon exactly the same conditions of fact as to the question of infringement; and where the consequences are so dire as in this instance to the petitioner, by the finding of three of them, who happened to constitute a Court of Appeal—that this court should grant this petition for writ of certiorari to settle this question; that the statutes which make this petition possible, contemplate just such a condition for its grant; and this conflicting finding of the several courts and judges relating to the construction of the patent in suit and the fact of infringement thereof by petitioner's sewing machine would seem to justify and even assure the granting of this petition under the following decisions of this court:

Westinghouse v. *Boyden Power Brake Co.*, 170 U. S., 544.

Hobbs v. *Beach*, 180 U. S., 383.

Mast, Foos & Co. v. *Stover Mfg. Co.*, 177 U. S., 485.

Point II.

The vast sums of money claimed by the respondent Cramer of the petitioner by reason of the patent and this single jury verdict, the methods used by respondent Cramer to enforce such demands and the ignoring of the rules of decision of this court, alone securing such result—represent such matters of gravity and importance as entitle the granting of this petition.

It is, of course, true that the verdict in this case is only for the sum of twelve thousand four hundred and fifty dollars against the petitioner, and if this was all there were to it, so far as the monetary results are concerned, there might be a question as to the rightfulness of the petition and reasonable doubt of expectation as to its grant, but this judgment of twelve thousand four hundred and fifty dollars is simply the beginning of the levy upon the assets of the petitioner that apparently has no end, and as to the contention in sight amounts to many millions of dollars. It appears by the record in this case (Record, pp. 56 and 57) the respondent Cramer at the trial was permitted by the court to amend his declaration so as to restrict and confine the jurisdiction of the court in the assessment of damages to the Northern District of California.

Since the jury verdict as above, the respondent Cramer has brought five separate suits against the petitioner, namely, in the Northern and Southern Districts of California, the Southern District of New York and the Districts of Oregon and Washington, founded upon the same patent and judgment. In each of these cases the jurisdiction of the court and alleged infringing acts are confined in each

instance, to the respective districts. The aggregate amount of damages alleged and asserted in these several complaints amounts to nearly two millions of dollars. (Petition for writ, pp. 8-9.)

As it appears also by the sworn petition filed herewith the respondent Cramer is threatening separate suits against the petitioner by reason of the judgment in this case and his patent in every other of the remaining Federal Districts in the United States, thus putting the petitioner to as many separate trials as there are separate districts. It is entirely evident, judging from the declarations and claims already filed in the separate suits, that the aggregate sums of money claimed and to be claimed under these numerous suits, will aggregate many millions of dollars.

We earnestly contend, that, aside from the fact of this most unparalleled money demand made by the respondent upon your petitioner by reason of this patent and judgment; that the method of the respondent to enforce such demands by separate suits and trials is so extraordinary and unprecedented, that whether or not the patent should be found to be valid or invalid; so unjustifiable and oppressive—that for this reason, if for no other, this court should grant this petition and settle the questions of law and fact involved, for all of the respective Districts, in which said suits are pending and threatened.

Point III.

The petition should be granted because the only rightful construction that can be put upon the respondent Cramer's patent, read in connection with, and in the light of the file-wrapper and contents thereof, is the construction given by his Honor Judge McKenna, in the case of the respondent Cramer vs. your petitioner's agent Fry, 68 F. R., 201.

In this report of the case, and identified by the opinion of Judge McKenna, the Cramer patent with its drawings, specification and claims, are presented in full, together with your petitioner's combined cross-bar and vertical brace with band-wheel and treadle hung therein. It does not seem to us that we can add anything to the clear and comprehensive presentation of the right construction to be given to the respondent's patent in view of the file-wrapper and contents than as shown in this opinion. The case was on trial before Judge McKenna some two weeks, stubbornly contested upon both sides, and to the argument of the court, the conclusions arrived at and the authorities cited, we have nothing or little to add, and certainly nothing to take away. The respondent Cramer, and his counsel, certainly then recognized the rightfulness of this decision at that time, and acquiesced in it, for a considerable period of time. This opinion, and the conclusion thereof and the instruction of the jury to find for the defendant for non-infringement, were all present in the trial before his Honor Judge Beatty, and as appears by the petition for writ of certiorari, filed herein, pp. 6-7, his Honor Judge Beatty, independent of the decision of Judge McKenna, reached the

same conclusion there present. We beg leave to refer to this opinion and as having the same force and effect as if incorporated in this brief and a made a part thereof.

There is, however, one other restriction and limitation put by the file-wrapper and contents of the respondent Cramer upon his patent and the construction given to it not specifically mentioned by Judge McKenna, and that is, that in his application first filed, provided that the bearings of the trunnions cast solid with the treadle, might be *in* or *on* the vertical brace. Record 368 and 379, under the rejections made, this specification was so amended that the bearings are restricted to being placed *in* the brace and not *on* it. This modification in change between the file-wrapper and contents and the patent as granted, made necessary by the references given, or at most a voluntary change and restriction by Cramer himself, is made apparent when we see that the treadle bearings must not only be holes in the extremities of the vertical brace, but that the bearings must be holes *"through"* the vertical brace, for it is perfectly evident that Cramer supposed that the invention of his first claim could not be utilized or even operative in any way unless the precise mechanism and construction identified by this claim was present in the means for carrying out the invention, or, as stated in his specification: " *My invention consists in the construction* " *and combination of parts hereinafter fully described and* " *claimed.*"

We beg leave, also, to quote in connection herewith from the opinion of Mr. Justice Shiras in the case of *Hubbell* v. *United States,* 179 U. S., p. 84, as the latest careful and comprehensive statement of the law as to these matters, appearing as follows:

" It may be observed that the courts of this country can-

"not always indulge the same latitude which is exercised "by English judges in determining what parts of a ma- "chine are or are not material. Our law requires the pat- "entee to specify particularly what he claims to be new, "and if he claims a combination of certain elements or "parts, he cannot declare that any one of these elements "is immaterial. The patentee makes them all material "by the restricted form of his claim. Per Mr. Justice "Bradley in *Water Meter Company* v. *Desper*, 101 U. S., "332, 337; *Morgan Envelope Co.* v. *Albany Paper Co.*, "152 U. S., 425, 429. . . .

"It may be, as the appellant contends, that his method "of communicating the explosive force of the fulminate "to the powder charge is an improvement on previous "methods, and is superior in efficacy to that used in the "Government's cartridges; but our inquiry is not as to the "merits of the patent in suit, but is confined to the ques- "tion whether it covers, in legal contemplation, the de- "fendant's cartridge. . . .

"Nor can we accept the contention that these two com- "binations are identical because they are intended to ob- "tain the same result. What we have to consider is not "whether the end sought to be effected is the same, but "whether the devices or mechanical means by which the "desired result is secured are the same."

We think your Honors will be convinced upon a study of the respondent Cramer's patent and the asserted infringing device of your orator, namely, the device of the Deihl patent, that not only is there an entire difference of mechanical means for carrying out a desired result, but that the results themselves contemplated by the respective device are themselves different.

Point IV.

A rightful construction of the Cramer patent upon the face of the patent itself, without reference to the file-wrapper and contents, and the comparison thereof with petitioner's device, demonstrates clearly the fact of non-infringement of the first claim thereof by defendant's structure.

We respectfully submit that it is not imperatively essential to resort to the file-wrapper and contents of the Cramer patent to determine such construction, as to demonstrating non-infringement thereof, by petitioner's device, and that there are three reasons why the fact of non-infringement can be determined absolutely upon the face of the respondent's patent and a comparison thereof with petitioner's mechanism under the decision of this court.

1. The statement of alleged invention by respondent Cramer in his patent, the terms of limitations and restrictions used in the specification and carried into and made part of the first claim, and the absence of such means and devices and their application and use in respondent's structure, bars any contention of infringement.

2. The restricted field of invention in the sewing machine art at the date of the Cramer patent, the fact that the respondent's device, combined cross-bar, vertical brace treadle and band-wheel, is protected by a patent and respondent's device made thereunder, is strongly presumptive of the fact of non-infringement as to respondent's device, and in view of the nebulous patents in the sewing-machine industry should stand as a conclusive presumption.

3. The burden of proof of infringement rests upon the respondent Cramer, and has not been lifted as to petition-

er's device, especially as petitioner's devices are manufactured under their own (Diehl) patent.

The respondent Cramer, on the face of his patent, makes the following unqualified declarations as to what his inventions consists and the means for carrying it out:

"My *invention* relates to improvements in the *bearings* "of sewing-machine treadles; first, to keep the treadle-"bearings rigidly in line and at a fixed distance apart to "avoid friction, and second, to make its movement in use "noiseless.

"TO THIS END, MY INVENTION CONSISTS IN THE CON-"STRUCTION AND COMBINATION OF PARTS HEREINAFTER "FULLY DESCRIBED AND CLAIMED. . . .

"B REPRESENTS THE TWO TRUNNIONS, CAST AS A POR-"TION OF THE TREADLE AND EXTENDING FROM ITS SIDES "INTO LOOP-HOLES IN THE COMMON CAST-IRON CROSS-"BRACE, C. THESE TRUNNIONS ARE SHARPENED TO AN "EDGE OR CORNER ALONG THEIR LOWER SIDES AND THE "LOWER END OF THE LOOP-HOLE IS HOLLOWED TO AN AN-"GLE MORE OBTUSE THAN THE EDGE OF THE TRUNNION, "TO SERVE AS A BEARING FOR THE SAME AND PERMIT THE "ROCKING MOTION COMMON TO TREADLES. . . .

"THE TREADLE AND ITS TRUNNION-BEARINGS ARE "WHOLLY INDEPENDENT OF THE CROSS-BAR D, EXCEPT ITS "SERVICE, AS STATED, TO HOLD THE BRACE TO THE LEGS. "THE BEARING-HOLES IN THE BRACE ARE FORMED INTO "LONG VERTICAL LOOPS TO PERMIT THE ENTRANCE OF "TREADLE.

"Pieces of leather, F, or other soft material cover the "top and end of each trunnion, serve as cushions to keep "the same close in its bearing, to prevent the noise which "would result were the trunnions permitted to bounce and "thump endwise, when the trunnion is in motion. The "leather F is fitted to the curve of the upper side of the

"trunnion, which is an arc of a cylinder whose center of "oscillation is the lower edge of the trunnion. The same "leather also interposes between the end of the trunnion "and the adjacent iron. *f* is a block serving as a mere "backer, to which the cushion F is attached. This block "conforms to the back and top side of the cushion and "fills the loop-hole in the brace above the trunnion. It "also has tangs or projections *e*, resting in suitable re- "cesses in the brace C, which are held between the brace "and the web of the leg E, by which means the block and "cushion are held in place.

"BELOW THE BEARINGS OF THE TRUNNIONS B, I PRO- "VIDE CUPS M, ATTACHED TO THE ENDS OF BRACE C, TO "CATCH THE OIL THAT USUALLY DRIPS FROM SUCH BEAR- "INGS. BY THIS CONSTRUCTION MY TREADLE BEARINGS "ARE RIGIDLY FIXED, AND IN NO WAY LIABLE TO GET OUT "OF LINE OR TO ACQUIRE ADJUSTMENT. THE USUAL NOISE "IS PREVENTED AND OVERFLOWING OIL IS CAUGHT BEFORE "IT CAN DO DAMAGE.

"I am aware that sewing machine treadles have before "been provided with V-shaped bearings, and I do not "claim the same as my invention; but what I claim, and "wish to secure by Letters Patent, is—

"1. The vertical double brace joining the legs of the "two ends of a sewing-machine, PROVIDED WITH HOLES "THROUGH ITS LOWER EXTREMITIES TO SERVE AS BEAR- "INGS, IN COMBINATION WITH A TREADLE PROVIDED WITH "TRUNNIONS FITTED TO OSCILLATE IN SAID BEARINGS, SUB- "STANTIALLY AS SPECIFIED."

As to the question of infringement and manner of determining the same the case in this court of *Marsh* v. *Seymour*, 97 U. S., 538, lays down the plain rule of determination:

"Investigations of the kind are ordinarily best con-

"ducted by comparing the machine made by the respond-
"ent with the machines made by the complainant's pat-
"ent."

And in the case of *McCormick* v. *Talcott*, 20 How., 409, the court say:

"This court has had before them a species of evidence
"of all others best calculated to conduct them to the truth
"—evidence superior to, and unaffected by, the interests
"or prejudices of partisans, or by the opinions (the rev-
"eries, they may often be called) of a class of men styled
"experts; men as often skillful and effective in producing
"obscurity and error, as in the elucidation of truth. No
"witness can testify so clearly and so impartially as do the
"subjects (though mute) concerning which a controversy
"about identity or dissimilarity is pending."

Let us apply this rule and run a parallelism between the sewing-machine device of petitioner and that of respondent's patent as to the first claim. It is perfectly evident that in respondent's patent not only is the objectionable noise prevented by the appliances and attachments described in the patent, but that the same appliances keep the treadle bearings rigidly in line and a fixed distance apart to avoid friction, for if you remove these appliances the treadle and its trunnions would have free movements endwise and sidewise in the loop-holes, and the bouncing and thumping endwise would of course prevent the possibility of keeping the bearings rigidly in line or at a fixed distance apart.

Turning now to petitioner's structure, the following radical distinction and differences are apparently present without any similarities of function, purpose, operation or result. Remembering in this connection, as appears in the Cramer patent, that prior to the Diehl patent, the old cross-bar D as shown in the Cramer patent and the old

vertical brace C as shown in that patent were independent and separate constructions.—Turning now to petitioner's device, we find that for the first time in the sewing-machine art:

1. The cross-bar and vertical brace in a sewing machine have been cast together as a unit structure.

2. That the cross-bar and vertical brace have been so cast as to form two loops, in one of which loops is hung the band or driving wheel of the sewing machine and the other of which loops, formed by cross-bar and brace, is hung the treadle of the sewing machine.

3. That the casting of the combined cross-bar and brace to form and compose and include these two loops to carry the moving parts of treadle and band-wheel independent of the machine was a problem applying largely to the casting art, and one of much difficulty.

4. That the treadle of petitioner is hung in an offset in the old common cross-bar, and not in the vertical double brace, the same as if an offset had been made in the old common cross-bar of the respondent's patent, and the treadle hung therein, independent of the cross-brace.

5. That there are no holes whatever in the lower extremities of petitioner's vertical cross-brace to serve as any kind of bearings whatever.

6. That there are no trunnions of any kind, nature or description on petitioner's treadle.

7. That there are no bearings of any kind, nature or description in the vertical cross-brace of petitioner's machine.

The Diehl patent, describing petitioner's mechanism, points out and particularly identifies the purpose, operation and function and result of this particular unit casting carrying both the band-wheel and the treadle as follows:

"My invention relates to an improved construction of

"such sewing machine stand; and its object is to secure a "permanent and reliable support and adjustment for both "the band wheel and treadle and to preserve their respec- "tive relative positions so that they will always co-operate "to produce the best results with the least danger of fric- "tion or binding. . . .

"My invention is shown as applied to a stand adapted "for use in supporting and driving a Singer I. F. sewing- "machine; but I do not confine myself to any particular "form of stand, the essential part *of my invention being "the providing of supports for both the band-wheel and "the treadle, which are integral with the brace, so that "when said band-wheel, with its driving-crank and said "treadle, have been hung within said brace and connected "by a suitable pitman their adjustment to and relationship "with each other are practically permanently secured.*"

That the treadle of your petitioner is mounted in the cross-bar and not in the vertical brace, is made certain, not only by the statements and drawings, but by the fifth claim of the patent which is as follows:

"5. A cross brace for sewing-machine stands, having "at its base a cross-bar, combined with a treadle, *mounted "in said cross-bar, substantially as set forth.*"

In view of these facts and differences, we respectfully submit that no possible infringement can be found.

We are aware that in the opinion of the Court of Appeals, that court has quoted largely from advertising matter of your petitioner, in catalogue form, referring to the advantages of the device of the Diehl patent, and the opinion of the Court of Appeals seems to be a species of special pleading to convince itself that the language of these circular and catalogue advertisements of your petitioner had something to do with the alleged invention of Cramer's patent. It is perfectly evident, in reading these

circular advertisements of your petitioner, that the adjustment and alignment between the band-wheel and treadle is the only adjustment and alignment, spoken of or contemplated by the Diehl patent, and that this adjustment and alignment has an entirely different object and purpose, from that of the Cramer patent, being the adjustment and alignment of two moving parts, band-wheel and treadle, in relation to each other. We respectfully submit that there is no comparison or relationship between the treadle operation of Cramer, its operation and construction, with the asserted alignment and relationship between the band-wheel and treadle, by the regulation of the same in the unit casting of Diehl. In the opinion of the Court of Appeals, a sinister conclusion seems to be drawn against your petitioner in this matter, because in February, 1883, the respondent Cramer wrote your petitioner, calling attention to his patent of a month before and attempting to sell the same, or some rights thereunder, to your petitioner. This fact is not significant, because the respondent Cramer at the same time wrote every other sewing-machine manufacturer in the United States to the same effect, and it is a curious comment upon the conclusions found in the opinion of the Court of Appeals that no sewing-machine manufacturer of the United States, although frequently importuned by Cramer so to do, ever considered his patent of such value or importance as to even negotiate for the use of the same, much less adopt it and use it upon a single machine, during the entire life time of the patent.

There appears also by the opinion of the Court of Appeals that another sinister conclusion is drawn against your petitioner, because your petitioner, several years after the date of the Cramer patent, through its foreman, Diehl, incorporated and put in its machine the Diehl

brace, as shown and protected by his patent, and as herein proceeded against; there is manifestly no relation between the two events, and we respectfully contend that this apparent conclusion is without any foundation of logic or reason, nor finds any support from any fact present, the Diehl construction being a plain confirmation of the petitioner's position, that the Cramer device and patent is and was without value or utility and importance, as to recognition or adoption, by the petitioner or any other sewing-machine manufacturers.

The opinion of the Court of Appeals seems to lay some stress to the disclaimer in the Cramer patent in the statement of the respondent Cramer; he is "Aware that sewing-"machine treadles have already been provided with V-"shaped bearings and I do not claim same as my inven-"tion." There is absolutely no significance to this disclaimer, except that which is found by an examination of file-wrapper and contents, wherein it appears that Cramer when he first went into the Patent Office, supposed that he was the inventor of the V-shaped treadle-bar, for he says in his first application, "My invention consists in "having the ends of the treadle-bar V-shaped to fit in hole "in brace C and, etc." The Patent Office also says that this V-shaped or knife-edge bearing was the invention he desired to claim, and rejected him upon patents, showing the knife-edge bearing on sewing machines. Cramer then stated in substance that V-shaped bearings, *per se,* was not his invention, but V-shaped bearings upon a trunnion, and the particular and peculiar kind of socket or bearing in the brace was his invention; and this is the extent, only, of the intention and meaning of the disclaimer, namely, that Cramer did not claim broadly V-shaped or knife-edge bearings, but that he was the first to use such bearings upon trunnions cast integral with the

treadle and in combination with certain loop-holes through the lower ends of the brace.

We have entered into no discussion of the old art in this case, for the reason that the claim is so distinct and the mechanism so particularized, that the old art could have no bearing upon it, so far as petitioner's device is concerned, as expressed in the case of *McClain* v. *Ortmayer,* 141 U. S., p. 424, where the court says:

" The object of the patent law in requiring the patentee " to 'particularly point out and distinctly claim the part, " improvement or combination which he claims as his in- " vention or discovery,' is not only to secure to him all to " which he is entitled, but to apprise the public of what is " still open to them. The claim is the measure of his right " to relief, and while the specification may be referred to " to limit the claim, it can never be made available to ex- " pand it."

And as in the case of *Keystone Bridge Company* v. *Phoenix Iron Company,* 95 U. S., 274, where the court says:

" When a claim is so explicit, the courts cannot alter or " enlarge it. If the patentees have not claimed the whole " of their invention, and the omission has been the result " of inadvertence, they should have sought to correct the " error by a surrender of their patent and an application " for a reissue. . . . But the courts have no right to " enlarge a patent beyond the scope of its claim as allowed " by the Patent Office, or the Appellate tribunal to which " contested applications are referred. When the terms of " a claim in a patent are clear and distinct (as they always " should be), the patentee, in a suit brought upon the pat- " ent, is bound by it . . . He can claim nothing be- " yond it."

Also in the case of *White* v. *Dunbar*, where the court says:

"The claim is a statutory requirement, prescribed for "the very purpose of making the patentee define precisely "what his invention is; and it is unjust to the public, as "well as an evasion of the law, to construe it in a manner "different from the plain import of its terms."

We understand the rule of law laid down in these decisions to be hereto applied that the respondent Cramer cannot now insist that his first claim shall have a liberal construction, and that the special and peculiar devices described by him in specification and identified by his claims are not necessary constituents of his claim.

If the question of the old art can possibly cut any figure where the patent is so narrow and restricted, so precise and so definite as to its inventions and claims as this Cramer patent, then the Bourdin patent of 1874 shows a treadle hung in the lower depending ends of the cross-brace of a sewing machine and is illustrated upon page 384 of the Record. The old art also is cited in the rejections of the patent in suit and as confining it to the exact and specific mechanism as found in the Record, pages 379 to 398.

We also submit that the fact is well known that the field of invention in the sewing-machine industry, as shown by many reported cases, was restricted at the date of the Cramer patent to an exceedingly narrow compass, and so far as mechanical construction is concerned, left small room for the exercise of the inventive faculty, and certainly confined and restricted the inventor to inventions of a specific and detailed character, and that this fact should be recognized as strongly presumptive of non-infringement of a device differing in any material respect from the patented device. The federal courts of the United States have frequently recognized the crowded condition of the art in

the sewing-machine industry, and decisions where sewing-machine patents have been involved, as, for example, in the case of the *Standard Sewing Machine Company* v. *Leslie*, 78 F. R., 329, the Court of Appeals of the Seventh Circuit, speaking to this exact point, says:

"It is a matter of common knowledge that for many "years sewing machines of many and different modes of "operation have been in use and were upon the market, so "that it is questionable that in the then state of the art "improvements could be effected which could be properly "classed within the domain of inventions have been "deemed other than mechanical equivalents."

The proposition is undisputed that the burden of proof to establish infringement is upon the respondent Cramer.

Seymour v. *Osborne*, 11 Wall., 516.

Imhauser v. *Buerk*, 101 U. S., 647.

And this burden has not been met or lifted by the respondent Cramer as against the petitioner's device, but has been made heavier and intensified and seemingly made impossible, in view of the crowded state of the art, by the fact that the petitioner works under and in accordance with letters patent of its own, the rule of law in this court being under the circumstances that strong and at times conclusive presumptions exist of non-infringement by reason of these facts.

Corning v. *Burden*, 15 Howard, 271.

Boyd v. *Janesville Hay Tool Co.*, 158 U. S., 260.

Miller v. *Manufacturing Co.*, 151 U. S., 208.

For these reasons from the face of the patent itself, and under the authorities, and without reference to the file-wrapper and contents, we submit that the asked instruction of the court to find for petitioner on the ground of non-infringement should have been granted.

Point V.

The judgment is wholly unjustifiable because the respondent Cramer suffered no damage of any kind, character or description whatever by reason of the alleged infringing acts of the petitioner; but upon the contrary, if his patent was of any value or utility, the petitioner furnished a wide market for him therefor.

All testimony regarding the practical exhibition and utilization, if any, by Cramer of his patented device as represented in this record by the deposition of Cramer himself and of his then two young children supposed to be corroborative in part. No witness was called who ever bought of respondent Cramer a sewing machine with his patented brace therein, no witness was called who ever used such a machine, and not witness was called who ever saw such a machine, aside from Cramer and his two children. The respondent Cramer, however, in cross-examination testified and made certain several facts and conditions which makes it impossible that the judgment of the court upon the jury verdict can be recognized or sustained. These facts are:

1. That Cramer never made or had made but two sets of castings of his patented device, one set of castings at Sonora, California, in the year 1881, some five or six in number; the other set at San Francisco, California, in the year 1883, and that both sets of castings did not aggregate more than forty in number.

2. That he never put in to exceed between twenty-five and forty of his patented braces in sewing machines.

3. That his patented sewing-machine braces and treadles were principally put in second-hand machines.

4. That he bought these sewing machines at prices from five to forty dollars and sold them from forty-five to fifty dollars, the machines bought for forty dollars being new machines and sold for ninety, ninety-five and one hundred dollars.

5. That he "got or charged five dollars per machine" more on which he put in his patented braces and treadle.

6. That he had put in and sold out all of his patented braces by the year 1885.

7. That the petitioner never sent into or sold one of its sewing machines having the alleged infringing brace and treadle therein, in the State of California, until the year 1886 or 1887.

The testimony upon these points is clear and comprehensive and there is no contradiction thereof by the respondent Cramer except a general statement that he continued to sell machines with his patented braces "until "they came up there with theirs," a statement seemingly so manifestly absurd and grotesque in view of all of his former admissions as to be without worth of consideration.

We beg leave to here quote to your Honors the testimony of Cramer himself and all of the relevant testimony relating to the manufacture by him of his two sets of braces, not exceeding forty in number, and their incorporation in sewing-machine stands by him. This testimony of Cramer stating all the facts as to this matter we herewith quote in full by questions and answers, as it is simply conclusive to the end and fact that the verdict and judgment in this case is without shadow or ground of sustainment and that the court erred fundamentally and glaringly in refusing the requested instruction of respondent to instruct the jury to find for nominal damages only. We give prominence to this testimony by capitalization because it

is controlling and uncontradicted as the record made by the respondent Cramer himself.

"Q. So YOU COMMENCED SELLING YOUR PATENT IN "1881?

"A. YES, SIR.

"Q. AND YOU CONTINUED TO MANUFACTURE THEM "UNTIL SOME TIME IN 1885, WHEN YOU STOPPED?

"A. YES, THAT IS RIGHT." (Record, p. 83.)

"Q. HOW MANY MACHINES DID YOU SAY YOU SUC- "CEEDED IN SELLING WITH YOUR TREADLE ARRANGED IN IT "WITH THOSE TRUNNIONS AND KNIFE EDGES IN IT?

"A. BETWEEN TWENTY-FIVE AND FORTY.

"Q. How many years did you have them on the mar- "ket?

"A. I had them manufactured, the bulk of them I had "manufactured in 1883 at the O. K. Foundry." (Record, p. 151.)

"Q. When did you first put in any machine such a "combination as is described in your patent? . . .

"A. In 1880 had it all complete.

"Q. When did you first commence SELLING MACHINES "HAVING THAT INVENTION?

"A. IN 1881.

"Q. For how many years did you continue to sell "them?

"A. FROM 1881 UP TO ABOUT 1884, or somewhere "along there, 1884-1-2, or somewhere along there—until "they came up there with theirs.

"Q. YES, BUT IN THAT FOUR YEARS' TIME YOU SOLD "BETWEEN THIRTY-FIVE AND FORTY?

"A. YES, SIR, THAT IS IT." (Record, p. 154.)

"Q. How many sewing machines did you sell all to- "gether during that time, those that did have your pat- "ented device and those that did not?

"A. I could not tell you. I think I sold about—well, "FROM TEN TO EIGHTEEN A MONTH.

"Q. All together?

"A. Yes, sir.

"Q. You averaged about one a month that had this "combination with your patent in, while you were averag- "ing from ten to eighteen a month all together?

"A. I SOLD THEM IN A LITTLE WHILE AFTER I HAD "THEM CAST. IT DID NOT TAKE ME LONG TO SELL THEM. "I did not sell them so many a year." (Record,, p. 155.) . . .

"Q. YOU HAD YOUR PATTERNS MADE SO YOU COULD "GET CASTINGS DURING THAT ENTIRE FOUR YEARS?

"A. Yes, sir.

"Q. You were selling machines at the rate of ten or "eleven a month?

"A. Yes, sir.

"Q. YET IN ALL THAT TIME YOU ONLY SOLD THIRTY- "FIVE OR FORTY MACHINES OF YOUR PATENTED DEVICE?

"A YES, SIR. . . .

"Q. WHEN DID YOU SELL THESE THIRTY-FIVE OR "FORTY MACHINES?

"A. IN 1883 I HAD THOSE MANUFACTURED AT THE O. "K. FOUNDRY ON MISSION STREET, AND THEN I TOOK "THEM UP THERE, AND I DON'T KNOW HOW LONG IT TOOK, "BUT NOT LONG, TO SELL THEM OFF." Record, 158.)

"Q. How many sets of castings for this Cramer com- "bination did you have made in 1883?

"A. THERE WERE THIRTY-FIVE OF FORTY OF THEM "MADE IN 1883.

"Q. How many did you have made before 1883?

"A. OH, I DON'T KNOW. SIX OR SEVEN or somewhere "along there. . . . THE FIRST ONE WAS CAST IN JAN- "UARY, 1881." (Record, 159.)

"Q. Do you know how many sets of castings for this "combination you had made in 1881?

"A. I don't know—four or five—somewhere along there. . . .

"Q. When did you sell those six or seven machines "that you first put the combination in?

"A. I COULD NOT GIVE YOU THE DATE NOW, JUST EX- "ACTLY WHEN.

"Q. ALONG IN WHAT YEARS?

"A. I SOLD THEM THAT YEAR.

"Q. 1881?

"A. YES, SIR. As near as I can remember, I sold "them that year." (Record, p. 160.)

"Q. When did you take any further steps to have any "more castings made?

"A. In 1883 I came to San Francisco, and I had this "lot cast.

"Q. What time in 1883 did you get those castings?

"A. I don't know whether I have got the receipts with "me, or not, but I THINK IT WAS IN THE EARLY PART OF "1883." (Record, p. 161.)

The testimony of Cramer himself shows conclusively that since the year 1885 he never even attempted to sell a sewing machine in which he put a brace with treadle hung as shown in his patent. The truth of this fact appeared several times in his testimony when the direct point was not in his mind, as exhibited by the following questions and answers:

"Q. What was the highest price that you sold one of "these machines for in 1885 or 1886 that did not have "your treadle in it?

"A. I think I was pretty well run out of the business "at that time. I could not tell you. Yes, I was pretty

"well run out of the business. I don't know whether I "sold any that year.

"Q. DID YOU SELL ANY IN THOSE TWO YEARS?

"A. I DON'T BELIEVE I DID.

"Q. Do you know when you sold the last machine that "had your treadle in it?

"A. ABOUT THE YEAR 1884 or 1885."

Nothing can be more certain from the above testimony than that Cramer never put his patented treadle into any sewing machine after the year 1885, and probably not after the year 1884. He may not remember the exact day when he put in the last treadle, but the testimony shows without contradiction that he put the five or six patented treadles that he had cast in 1881 into sewing machines of that year. He swears positively that as to the first set of castings in 1881, *"I sold them that year."* The second set of castings he swears positively he had made at the O. K. Foundry on Mission street, San Francisco, *"in 1883;"* thirty-five or forty in number; that they were cast in the "early part of 1883." And as to these castings he swears positively: *"I sold them in a little while after I "I had them cast. It didn't take me long to sell them."* These are all facts within the knowledge of the witness and all of these statements are proof positive that Cramer did not have and could not put in any one of the thirty-five or forty brace castings, in any sewing machine after the year 1885.

The presence of Cramer's patented brace in his second-hand machines or in others, bore no actual relation to the price he received for the machine.

The simple reading of the testimony of Cramer shows that the prices at which he sold the sewing machines bought by him had nothing to do with the presence of his

patented brace therein, and that his statement twenty years afterwards that "he got or charged five dollars more" for such machines on account of the presence of his patented brace is manifestly untrue from his own testimony, it being entirely evident that if he could have obtained a dollar more for his machines as profits by the presence of his patented brace he would have put them in all machines and made this profit. We herewith quote the testimony of the respondent Cramer in full as to this matter, that shows the absolute correctness of the statements and conclusions that must follow from such testimony:

"Q. What did you pay for these American machines?

"A. All the way, according to the amount I bought at "one time, and the different styles of machines. I bought "American machines—I also bought some second-hand "ones, for which I did not pay more than $5, and from "$5 to $40.

"Q. What would you sell a machine for that you paid "$5 for?

"A. The machine that I bought at $5 was a second-"hand machine. That I repainted and refitted it up, "done perhaps $10 or $15 worth of work on it—I could "not tell you exactly the amount, and I sold it for $45 or "$50, just as I had the chance, and just as the customer "happened to want it, on time or cash. The machines "that I paid $40 for were new machines. I sold them for "$90, and $95, and $100. I should say I don't remem-"ber now the exact price, but I think that is it, $95 or "$100.

"Q. I understood you to say that you sold those ma-"chines that you paid $40 for, for $90 or $95?

"A. Yes, sir." (Record, p. 363.)

The testimony shows, also, that Cramer put his thirty-

five treadles largely in second-hand sewing machines, as follows:

"A. I sold the American as a specialty, and I TRADED "IN SECOND-HAND SEWING MACHINES; most sewing ma- "chine men do that. THOSE I FIXED UP AND PUT ON "PATENT TREADLES AND SOLD THEM—I put on patent "treadles on some of them. IN THAT WAY I SOLD MOST "EVERY KIND OF MACHINE IN THE MARKET, that is, in "trading them and refitting them, THOSE THAT WERE GOOD "MACHINES AND WORTH BEING REFITTED, I FITTED THEM "UP AND SOLD THEM AT SOME PRICE."

Let us see, now, whether we are correct in our statement that as a matter of fact the presence of Cramer's patented device in the few machines in which he put such devices had anything to do with the price at which he sold the machines. The first question and answer that throws any light upon and fixes this fact is upon the direct examination of Mr. Cramer, where he was asked by his counsel as follows (Record, p. 77):

"MR. MILLER: Q. Mr. Cramer, after you got up "your invention, what did you do with regard to putting "it into use and selling machines containing the same?

"A. I had them manufactured, put them into ma- "chines, and I HAVE SOLD THE MACHINES FOR FIVE DOL- "LARS MORE THAN I WOULD, an advance of five dollars on "the patent treadle.

"Q. When did you first commence selling the machine "with the invention in it?

"A. In 1881, the first one I had cast. That was cast, "you know, at the foundry in say, January, 1881.

"Q. What foundry did you have the first one cast at?

"A. At Sonora.

"Q. In the foundry at Sonora?

"A. Yes, sir.

"Q. What did you do with that machine after you had "it finished?

"A. I put the casting onto the machine shortly after- "wards, or put it onto a second-hand machine, and sold it "for—well, I sold that for a big price; I got $50 for it."

Also on page 81 the plaintiff Cramer was asked as follows:

"Now, Mr. Cramer, regarding the prices at which you "sold your machines, did you get any additional price by "reason of having your improvements on the machine, "*over the old machine*?

"A. I GOT $5 MORE; I CHARGED $5 MORE." (Record, p. 81.)

Objection was made to this testimony that was overruled by the court, and exceptions taken. (P. 82.)

Cramer testified further, as follows:

". . . SOME MACHINES I SOLD AT DIFFERENT PRICES "FROM OTHERS. I SOLD THEM ALL THE WAY FROM $65 "TO $90, AND SEVERAL OF THEM UP TO $100." (Record, p. 82.)

"Q. What prices did you have to pay the O. K. Foun- "dry for casting those parts?

"A. They cost me a dollar and a half, all told; that "is, the castings and the painting all together, cost me "1.50."

The acts of the petitioner and of all other sewing machine manufacturers in the State of California furnished an inexhaustible market for the alleged Cramer device, if it was of any value, before and during the whole lifetime of the Cramer patent.

If your Honors will please to remember, that the respondent did not manufacture sewing machines, was simply a dealer in them by purchase and sale, principally

of second-hand machines, and that he only attempted to utilize his invention or device by taking the braces and treadles out of the old machines and substituting his patented device therefor, *it can be readily seen that the only market that Cramer would have for his device would be furnished by sewing machine manufacturers who sent into his state and locality sewing machines with treadles mounted in the machines independently of the cross-brace.*

All the testimony in this case, and confirmed by the testimony of Cramer himself, is that during the lifetime of his patent not only did the petitioner, The Singer Manufacturing Company, but also every one of the other leading sewing machine manufacturers of the United States send to California and occupy the market of California with countless thousands of sewing machines with their treadles hung therein independently of the cross-brace. Cramer himself testified that during the life of his patent in California "the cross-brace containing my patent was "only sold by me and The Singer Company that I know "of," the testimony being that Cramer put his patented treadle in stands already in existence; that "he took the "brace out of those stands and put the new brace and new "treadle in;" and further, that Cramer "had all sorts of "second-hand machines on hand. You could take the legs "of almost any sewing machine; it would not make any "difference what sewing machine the legs belonged to; it "didn't affect the brace or treadle." (Record, p. 298.) Cramer, himself, giving the names upon examination, of all the leading manufacturers of sewing machines in the United States, who during the life of his own patent, sold sewing machines in California to his knowledge and all of them having the treadle hung in the machine independently of the cross-brace. (Record, p. 164.) It needs no argument nor elaboration, then, to show that, as a matter

of fact, during the entire lifetime of the Cramer patent in the State of California there was furnished Cramer a market, and a mine, inexhaustible, for the utilization of the invention and device of his patent in suit if it had been of the slightest value. And that, as a matter of fact, there would have been no market in the State of California for the alleged invention of his patent unless the sewing machine manufacturers of the country had furnished that market by sending sewing machines into that state with treadles hung in the machine independently of the cross-brace. What absolute folly, then, it is to claim or contend that the *"business"* of the respondent Cramer had been ruined or damaged in any way by the petitioner, and what monstrous injustice is perpetrated, not only upon the petitioner, but upon every rule of right and principle of law laid down by the established decisions of this court to justify any finding of damages for the alleged infringement of a patent—to permit the judgment to stand.

Point VI.

The petitioner, the Singer Manufacturing Company, could not have damaged the respondent Cramer's "business" in the installation of his patented braces in the existing machines in the State of California, because the petitioner did not send any sewing machines into the State of California containing the alleged infringing device of Cramer's patent until nearly two years after the abandonment by Cramer of any attempt to place his patented brace in any sewing machine.

It seems impossible to the writer of this brief that any other conclusion can be arrived at upon the reading of the

testimony of the respondent Cramer, than that Cramer had ceased entirely, of necessity, if not from choice, in the incorporation or in attempting to incorporate his patented brace into any sewing machine, second hand or otherwise, by the year 1885. Of course, if the petitioner, The Singer Manufacturing Company, did not send its machines with the alleged infringing brace therein into California until after the year 1885, no damage whatever could have followed to the respondent Cramer by such an act and there would be simply nothing in this record to justify the verdict. The testimony on this point is positive and unequivocal; and after the respondent Cramer had given his testimony as above, the respondent, The Singer Manufacturing Company, then disclosed upon the record, by the testimony of numerous witnesses, that no sewing machine had ever been sent into the State of California containing the Diehl brace or any brace complained of as an infringement of the Cramer patent, until after the month of April, 1886. These facts were proven by memoranda and data that could not be questioned independent of the recollection of any witness, and the facts were further proven that, although the first shipment of the Diehl brace reached San Francisco in April, 1886, it was not put upon the market until the year 1887, by reason of the fact that they had on hand such a large number of the old machines with the old braces thereon.

The fact is also proven beyond dispute that the Diehl brace or the brace found as an infringement by the jury therein was known to all of the employees of the petitioner in California as the "1877 stand." These facts are testified to, and not clouded, by Mr. McMillan, in charge of the stands at that time, and that the first machines were received in April, 1886 (Record, pp. 441-2), Mr. McMillan explaining why the Diehl stands were not put upon the

market until 1887, because "we always worked our old "stock off before starting on a new lot. It was the rule "of the house and is yet." (Record, p. 582.) The same fact was also testified directly and as a matter of corroboration by Charles F. Krantz, a machinist working upon stands in San Francisco; by Henry F. Blanchett, an employee of The Singer Manufacturing Company for twenty-two years (Record, pp. 606-9); Donald MacKenzie, an old employee of the petitioner. (Record, 618.) There is simply no dispute or contradiction of this fact, and how the jury could have found or the judge permitted such finding to stand, as is represented by the verdict, in view of these facts, would seem to be incomprehensible to any fair student of this record. The only possible explanation that can be given for the fact that the court allowed the verdict to stand in the face of this testimony, is the manifestly improbable statement of the respondent Cramer, and a statement whose purpose and intent is perfectly evident and in direct contradiction of the fact, namely, that he did not cease putting his patented treadle into sewing machines until after the petitioner came up there with theirs "and drove him out of business." Manifestly and without question this was a statement of Cramer simply for its effect upon the jury and bore not the slightest relation to the facts in this case. The petitioner did not "come up there" until nearly two years after he had ceased putting in his patented brace in any sewing machine, and he then had no "business" that the respondent or any other sewing machine manufacturer could drive him out of.

Point VII.

This petition for writ of certiorari should be granted because the defense by your petitioner of its agent Fry, in the Cramer-Fry suit, tried before and decided by his Honor Judge McKenna by an instruction to the jury to find for the defendant upon the ground of non-infringement—was an open defense made by your petitioner wherein your petitioner paid all costs of such litigation and counsel fees, and such facts were known by respondent Cramer's counsel in that case, as appears by positive proof shown and offered in this case.

As appears in detail by the petition filed herein, in the trial of the case before his Honor Judge Beatty, his Honor instructed the jury to find for the defendant primarily upon the ground that the subject-matter was *res adjudicata* as to this matter against your petitioner for the reason that the petitioner defended the case of respondent Cramer against its agent Fry in the trial before Judge McKenna, paid all the expenses of that litigation, counsel and court fees. This finding upon the part of Judge Beatty on appeal to the United States Circuit Court of Appeals for the Ninth Circuit was reversed upon the ground that such defense, although made by the petitioner, was not an open defense known to the respondent Cramer, the case being reported in Federal Reporter.

So strong, however, was the belief of the petitioner that the record in that trial upon its face did disclose an open and notorious defense of its agent Fry that a petition for writ of certiorari was lodged in this court at the October Term, 1898, but the petition was opposed upon the ground that there had been no final trial of the case, that it was

reversed and remanded for that purpose by the Court of Appeals and the petition would not lie in this court under these circumstances. The petition was denied without opinion given and we suppose by reason of the above objection made. In the present case, however, in addition to the apparently obvious fact disclosed by the record on its face that the defense by petitioner of its agent Fry was an open defense and known and must have been known to the respondent Cramer, there appears in this record by positive testimony given and proof offered to the same effect that if the respondent Cramer did not personally know of the defense of Fry by your petitioner in that case, that his counsel who instigated and conducted the suit did know it from start to finish and tried the case solely upon the theory and for the reason that your petitioner was back of the suit, and solely for reason of the effect and binding character of that litigation upon the petitioner, if successful. The Court of Appeals, as shown by their decision, refused to reverse the finding of the court, and verdict instruction to the jury upon this point, and refused to send back the case by reason of the error upon the part of the trial judge in refusing to permit evidence of the knowledge of the respondent Cramer's counsel of the fact of the petitioner being back of its agent Fry, because so far as the writer of this brief can ascertain from the opinion, that the petitioner had at one time challenged the jurisdiction of the court, when sued jointly with its agent Fry, and upon motion was dismissed therefrom; and upon the ground that there was no error upon the trial judge in refusing testimony offered to show, or tending to show, the knowledge of the respondent Cramer's counsel of petitioner's defense of its agent.

There is is no conflict in the record whatever upon the

following conditions and statements of fact established by testimony:

(1) That the petitioner paid all the expenses and costs, court and counsel, of every kind and description of petitioner's agent Fry in the Cramer-Fry litigation. (Kierce dep., 628; Fry dep., 635-6.)

(2) That the Eastern expert, Mr. Brevort, who testified in behalf of the defense in the Cramer-Fry suit was in the employment of the petitioner. (Record 401.)

(3) That the Eastern counsel for the petitioner came to San Francisco and assisted in the conduct of the trial of *Cramer* v. *Fry* for the defense.

The trial judge, however, refused to admit any testimony showing, or tending to show, the knowledge of Cramer's counsel that the petitioner was back of its agent Fry in that litigation and was conducting the defense, although convincing proof was offered to establish this fact, the Court of Appeals sustaining such refusal. (Kierce dep., Record 622-3; Record 642-7.) The trial judge instructing the jury that this fact of defense must be *"known "to the plaintiff Cramer at the trial of said case."* (Record, p. 793.) And the Court of Appeals sustained such finding.

Respondent Cramer's bare denial that he did not know that petitioner was back of its agent Fry in the Cramer-Fry litigation, contradicted by all of the facts and his other testimony.

The respondent Cramer sees fit now to deny that he knew the petitioner was back of its agent Fry in that suit, but his testimony, when his attention was not directed particularly to this point, speaks otherwise, as for example, Record, p. 717:

"Q. How came you then, to join the Singer Company "with Mr. Fry when you brought that suit?

"A. *You must ask the attorneys about that, how that "happened. I don't know how—he was in their office in "the former trial of Cramer and the Singer Company, "they were joined together, and I presume that the attor- "neys thought that it would do that time, too. That is "what I imagine. I don't know anything about it. But "I heard the attorneys talk that time—that they would "take the two in together.*"

Again, illustrating the kind of knowledge that Cramer supposed he must possess as to this matter and his conception of the sanctity of his oath regarding this same matter, he having sworn in his complaint filed herein, in several places, that Fry was the agent of the petitioner and based his suit upon that fact, testified as follows (Record, p. 718):

"Q. Do you mean to say that you did not know when "you brought that suit *that Mr. Fry was the agent of the "Singer Company?*

"A. *When it comes to right knowing, where could I "know; where is my authority for knowing?*

"Q. The question is, did you know or not?

"A. *I did not know.*"

The respondent Cramer also stating in his deposition certain facts that show conclusively that he was after your petitioner and not Fry in that litigation and knew the petitioner was back of its agent, as follows: "*When I got "through with Mr. Fry I would go to New Jersey and sue "the Singer Company.*" (Record, 720.)

We respectfully submit that under the well settled authorities it made no difference whether or not the respondent Cramer knew the petitioner was back of its agent Fry,

if his counsel knew it. The law of principal and agent applies to the relation of attorney and client.

Weeks and Attorneys at Law, p. 441.

Wharton on Agency, Sec. 580, and authorities cited.

Directly bearing upon this point also is the federal enactment, Sec. 35 of the Judiciary Act, which provides that where a defendant employs an attorney of the court, "the "attorney stands in his place until such attorney is "changed or discharged, as he has the exclusive control of "the conduct and management of the suit." The law upon the subject is concisely stated in the opinion of Mr. Justice Bradley in *Distilled Spirits cases*, 11 Wall., 367:

"The general rule that a principal is bound by the "knowledge of his agent is based on the principle of law "that it is the agent's duty to communicate to his princi- "pal the knowledge which he has respecting the subject- "matter of negotiations, and the presumption that he will "perform that duty. . . .

"This rule does not depend in either case upon the fact "that the agent *has* disclosed the knowledge or informa- "tion to his principal; subject to the exceptions named, "the law conclusively presumes that he has done so and "charges the principal accordingly."

There is no doubt under the authorities that if the petitioner was back of its agent Fry, or even contributed to his defense, the petitioner would be bound by the judgment therein and thereby, the rule upon this subject being found in representative cases at the Circuit of *The Eagle Mfg. Co.* v. *Miller*, 41 F. R., 351: *The David Bradley Mfg. Co.* v. *Mfg. Co.*, 57 F. R., 980.

The principle recognized at the Circuit as to this matter seems to be founded upon decisions of this court which

appear to go much farther in principle and application than heretofore made at the Circuit. That principle is that where suit is brought against a party who should be defended by another or third party, even jointly with the party sued, and such party has notice of such suit, it is the duty of such third party to defend the party sued, and that he is bound by the judgment against the party whose duty it was for him to defend.

The case of *Robbins* v. *City of Chicago*, 4 Wall., 657, seems to us to lay down the principle upon which all of these cases are founded. In that case the party sued the City of Chicago for injuries growing out of certain improvements being made in the street, in which action the abutting property owner was jointly liable with the city. The abutting property owner did not appear at the trial, nor was he a party thereto, but he knew that the suit was pending and he might have taken part in it, the court holding that he was bound by the judgment recovered against the city and could not in another action dispute its validity.

To the same effect is the case of *Lovejoy* v. *Murray*, 3 Wall., p. 1. As disclosed by that case, an action of ejectment had been brought, and the party claiming the attached property gave an indemnity bond, subsequently the sheriff was sued for disposing of the property in pursuance of his bond, and a judgment was recovered against him. This court in this case held that it was the privilege and the duty of the party who gave the bond to defend the suit against the sheriff, and that he should not enter into a new suit to contest the validity of the judgment recovered against the sheriff, but was bound by it.

In these cases it seems to us clearly that this court has announced the principle that where it is the duty of a party who has the right to come into an action and defend it and fails to do so, knowing the pendency of the action

and its conduct, he is bound by the judgments recovered, and that the same principle should be applied to the facts and conditions disclosed by this record and as applied to your petitioner.

We respectfully submit, therefore, that it was grave error to refuse admission of testimony directly or indirectly showing the knowledge of respondent Cramer's counsel of petitioner's defense of its agent Fry, and that it was grave error to refuse to instruct the jury to find for the defendant under the undisputed facts as to this whole matter also.

Point VIII.

The petition should be granted because the whole record in this case shows that there is absent from the entire testimony, given by the respondent Cramer, any reliable proof that he has suffered any damage by reason of any act of the petitioner; and that upon the face of all of the proof given by him, petitioner's requested instruction to the jury to return a verdict for nominal damages should have been given, if technical infringement should be found to exist.

This is not a case where the profits recoverable against an infringer of a patent is a measure of damages. If there were any such profits, and proven, they might establish a measure of damages. (*Mowry* v. *Whitney,* 14 Wall., 620; *Root* v. *Railway case,* 105 U. S., 198.) And even where profits may be considered the measure of damages, it is the profits that an infringer actually has made and not which can be proven that he might have made, which is to govern. (*Burdell* v. *Dening et al.,* 92 U. S., 220.) As has been seen, Cramer's testimony is in sub-

stance and effect, only that he was a dealer in sewing machines, second-hand and new. That covering a period of five years, 1881 to 1885, he took out of such machines the braces he found therein with treadles, and put in his own braces, not to exceed forty in number, and that he paid from $5 to $50 for the machines, old and new, and sold them from $45 to $100. (Record, pp. 77 and 363.) His only testimony, that even remotely relates to any added value of the machine by putting in his patented treadle, is found in two statements as follows (Record, p. 77):

"MR. MILLER: Q. Mr. Cramer, after you got up "your invention, what did you do with regard to putting "it into use and selling machines containing the same?

"A. I had them manufactured, put them into ma- "chines, *and I have sold the machines for $5 more than I "would, an advance of $5 on the patented treadle.*"

Also, on Record, p. 81, the following question and answer:

"Now, Mr. Cramer, regarding the prices at which you "sold your machines, did you get any additional price by "reason of having your improvements on the machine, "over the old machine?

"A. I GOT $5 MORE; I CHARGED $5 MORE."

We respectfully submit that such testimony is a long way from proving the fact of any added value to any sewing machine, by placing therein by respondent Cramer of his patented treadle. As before stated, no person is called who ever bought or sold or used a machine with Cramer's patented treadle therein. The difference in price at which he bought all of these sewing machines and at which he sold such machines after his patented treadle was placed therein, shows that the presence of the patented treadle in the machine had nothing to do with the price of its sale, and the testimony of Cramer, showing that dur-

ing all those years he sold sewing machines bought by him, without putting in his patented treadle, from fifteen to eighteen per month.

No rule or principle of law is better settled in this court than that damages must be proved and not guessed at (*Philp* v. *Nock*, 17 Wall., 462); and that the burden of proof rests upon the respondent. (*Blake* v. *Robertson*, 94 U. S., 733.) The case in this court of *Boesch* v. *DeGraff*, 133 U. S., 705, seems to be so applicable as to its facts and conditions, to the case at bar, that we here quote from the same with our own italics, as to what we deem particularly relevant application thereof:

"Where the patentee granted no license, and had no es-
"tablished license fee, but supplied the demand himself,
"and was able to do so, an enforced reduction of price is
"a proper item of damages, if proven by satisfactory evi-
"dence. *Yale Lock Mfg. Co.* v. *Sargent*, 117 U. S. 356.
"The damages must be actual damages, but where the pat-
"ented feature is the essential element of the machine or
"article, as in the case just cited, if such damages can be
"ascertained they may be awarded. *When, however, a*
"*plaintiff seeks to recover because he has been compelled*
"*to lower his prices to compete with an infringing defend-*
"*ant, he must show that his reduction in prices was due*
"SOLELY *to the acts of the defendant, or to what extent it*
"*was due to such acts.* *Cornely* v. *Marckwald*, 131 U. S.
"159. There must be some data by which the actual dam-
"ages may be calculated. *New York* v. *Ransom*, 23
"How., 487; *Rude* v. *Westcott*, 130 U. S. 152. . . .
"Conceding that as Graff granted no licenses, and had no
"established license fee, but supplied the demand for the
"burner himself, and that, therefore, if he was compelled
"to lower the price by the infringement he would recover
"for the loss thus sustained, does the evidence satisfac-

" torily establish that the reduction in prices was due solely " to the acts of the defendants in infringing? *The opin-* " *ion of Mr. and Mrs. Graff to that effect is not sufficient.*"

Applying the language of the court to the facts in this case, it would seem that the opinion of the respondent Cramer is not sufficient; and the respondent Cramer never having manufactured or put into sewing machines his patented brace to exceed forty in number during the period of five years, his statement that the petitioner drove him out of "business" is a mere opinion and represents an impossible condition, especially when we remember that the respondent had gone out of "business" two years prior to the date of the appearance of the petitioner's machines in any part of California.

Over and beyond all this, there are two claims to Cramer's patent in suit, representing distinct and separate improvements and asserted inventions, each claim must be considered as a separate patent, and it is admitted that respondent's machine does not infringe the second claim—and there is no proof that the first claim in itself is of any value, separated from the second claim.

We respectfully submit that the instruction to find for nominal damages only should have been given upon the point alone that there being two claims to Cramer's patent, only one of them alleged to be infringed and no proof as to the value of the devices of the first claim or distinction from the devices of the second claim, and the proof being that the forty braces of Cramer made in the five years contained the inventions of both claims—the instruction should have been given as to nominal damages only, based on rule that where there are two claims in a patent, and only one relied upon, the proof must show distinctly and precisely the damages as to the relied-upon claim. *Parks*

v. *Booth,* 102 U. S., 96; *McCreary* v. *Canal Co.,* 141 U. S., 467; *Seymour* v. *McCormick,* 16 How., 485; *Garrettson* v. *Clark,* 111 U. S., 121; *Buerk* v. *Imhauser* 101 U. S., 664; *Black* v. *Thorne,* 111 U. S., 124.

Point IX.

The petition should be granted because the hanging of a sewing machine treadle in a vertical cross-brace in itself is without practical value, advantage or utility, and manifestly is without patentable novelty.

The testimony in this case shows, both by the record and the petition filed herein, that the hanging by your petitioner of its treadle in offsets in its cross-bar allied by a casting with the unit vertical double brace is a mere accident or incident of construction having for its object only a fixed alignment between the treadle and band-wheel in a cast unit structure separate and distinct from the frame of the machine. It is perfectly manifest from this record that the treadle of respondent's would have been hung in the legs of the sewing machine to this day as such treadle had been hung from the beginning, and as such treadle is hung by every sewing-machine manufacturer in the United States, except for the ability of the petitioner to cast the apparently slight double brace and cross-bar into loop form in a composite concrete structure, hanging the treadle in one loop and the band-wheel in another for perfect alignment. The respondent Cramer himself testifies to his familiarities with all of the leading sewing-machine manufacturers of the United States and that all of them hang their treadle in the legs of the machine and none of them in the

brace (Record, p. 164), and that only he and the respondent ever hung a treadle out of the legs of the machine. The petition filed herein shows that although two years have expired since the date of the grant of this patent, no sewing-machine manufacturer in the United States has ever changed his mode of hanging his treadle in the legs of the machine; and the testimony of a large number of witnesses representing different manufacturers in the United States in this record is clear to the point that the device exhibited by the Cramer patent is of no value and that the place to hang a sewing-machine treadle is in the legs of the machine. (Record, pp. 502, 547, 565.)

We respectfully submit in view of these admitted and proven facts that there is no reliable proof in this record that there is any value or utility to the device of the respondent Cramer's patent and that there is abundant proof that no sewing-machine manufacturer in the United States during its lifetime or since ever would adopt or use it, although importuned by the respondent Cramer so to do, and that there is good reasons given in the various depositions constituting this record therefor; and that from these proven facts the alleged invention of the respondent Cramer is invalid and without patentable novelty or invention.

Conclusion.

Without further elaboration and without attempting to go into all of those corroborating and collateral circumstances and facts in this record that would bear out and confirm the statements and propositions here presented, and fearing that already this brief in support of the petition has gone beyond an expected presentation of the subject-matter necessary for the understanding of the court

of the controlling propositions determining the granting of the writ; and justifying only the length of this brief in the light of the questions at issue and the wrong and injustice believed to have been done the petitioner; we respectfully submit that it would be simple justice, for this court to grant this petition and give your petitioner a final day in court to determine the right or wrong of the acts committed, believing that such opportunity of presentation will demonstrate and make manifest to your Honors the unqualified hardship, wrong and injustice that has been done to your Petitioner and will follow forever, without redress, from a refusal to grant this Petition.

Respectfully submitted,

CHARLES K. OFFIELD.

IN THE

Supreme Court of the United States.

OCTOBER TERM, A. D. 1902.

No. 215.

SINGER MANUFACTURING COMPANY,
Petitioner.

vs.

HERMAN CRAMER,
Respondent.

On Writ of Certiorari to the United States Circuit Court of Appeals for the Ninth Circuit.

BRIEF AND ARGUMENT FOR PETITIONER

BY

CHARLES K. OFFIELD,
CHARLES C. LINTHICUM.

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Indisputably and admittedly, each of the thirty-five or forty machines sold by Cramer with his brace and treadle between the years 1881 and 1885 contained the devices of the second claim of his patent, and there is simply no testimony showing the value of the mechanism of this claim, or that any one of the thirty-five or forty sewing machines would have been sold without the presence of the devices of the second claim; all record evidence is clearly that Cramer's devices without this second claim are without value. 122

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IN THE

Supreme Court of the United States.

OCTOBER TERM, A. D. 1902.

No. 215.

SINGER MANUFACTURING COMPANY, Petitioner.
vs.
HERMAN CRAMER, Respondent.

On Writ of Certiorari to the United States Circuit Court of Appeals for the Ninth Circuit.

BRIEF AND ARGUMENT FOR PETITIONER

BY
CHARLES K. OFFIELD,
CHARLES C. LINTHICUM.

This cause comes to this court on certiorari. A petition for this writ was lodged in this court December 31st, 1901; the certoriari allowed January 21st, 1902, and return filed February 10th, 1902. The general grounds for the writ were set forth in the petition as follows:

(1) A direct conflict and variance of decision and result between the several judges sitting in the United States Circuit Court for the Ninth Circuit, and at the circuit; and between the judges of that circuit sitting in the Circuit Court of Appeals for that circuit; the entire subject-matter at issue and contest being the validity of cer-

tain letters patent issued to one Herman Cramer, respondent, dated January 30th, 1883, and No. 271,426, for an alleged improvement in Sewing Machine Treadles, and the denial of infringement thereof by petitioner. (2) That the petitioner has openly conducted and defended a suit by respondent defendant in error, in the United States Circuit Court for the Northern District of California, against its agent, Fry, brought upon this same patent, and against the identical alleged infringing structure in this action, and so known to respondent's trial counsel therein. (3) That by any legal construction of said Cramer patent upon its face, there can be no found infringement thereof by petitoner's structure. (4) That the Cramer patent rightfully construed and read with the file-wrapper and contents, assures the non-infringement thereof by petitioner's structure. (5) That there is absent from this record any reliable testimony establishing any damage, or measure of damage, by respondent by reason of any asserted infringing act. (6) That the respondent Cramer has, since the decision of the Court of Appeals for the Ninth Circuit, in the above case, begun separate independent suits against petitioner in a number of the Circuit Courts, for the several districts, in the United States, against the same precise structure as an infringement involved in this action, and is threatening to bring such suits in every remaining district and circuit of the United States, thereby involving your petitioner in litigation as to the same subject-matter in every circuit and district in the United States; whereas, all matters could be settled and disposed of by a single suit, and upon this petition.

The above is the substance of the petition presented to this Honorable Court, and which was promptly allowed.

No opinion was filed, or memorandum, upon the allow-

ance of the petition, and it does not appear upon which of the above grounds of assertion the petition was granted, or whether upon such grounds jointly or severally. However this fact may be, the case is now before this court for final review and determination, and, we take it, present for discussion and disposition as broadly as if present before this court upon writ of error, prior to the statutory organization of the nine Courts of Appeal, at least the case must be here disposed of upon the record filed.

Statement of facts antecedent to petition.

This is an action at law, brought for an alleged infringement of the above Cramer patent of January 30th, 1883, No. 271,426, for an alleged "Improved Sewing Machine Treadle;" the application for such letters patent was filed May 25th, 1882. (Rec., p. 33.)

The Singer Manufacturing Company, petitioner, is the manufacturer of Sewing Machine Stands and Treadles under certain letters patent granted Philip Diehl, No. 306,469, under date of October 14th, 1884, for a new and useful improvement in Sewing Machine Stands and Treadles, application therefor being filed May 29th, 1884. (Rec., p. 85.)

All of the sewing machines which have ever been made or sold by the petitioner, which are claimed to be an infringement in any way of the Cramer patent, were made in accordance with the drawings and specifications of this Diehl patent, and except the manufacture and sale by the petitioner of stands and treadles constructed in exact accordance with this Diehl patent, and in the manner therein described, it is not claimed that the petitioner or its agent, Fry, has done anything that can be contended, is or can be, an infringement of the Cramer

patent. It has never been contended by Cramer that the petitioner or its agent, Fry, has infringed any other than the first claim of such patent. (Rec., p. 36.)

Prior to the present action at law, a suit was begun at law by the respondent Cramer in the United States Circuit Court for the Northern District of California, for infringement of the patent in question, and against the precise device here proceeded against as infringement. This suit was filed May 31st, 1893, against petitioner, and its agent Willis B. Fry, for selling sewing machines containing the Diehl stands and treadles for petitioner.

Upon the facts appearing on the face of the complaint the suit was dismissed against your petitioner, the Singer Company, under the law as it then stood, and the case proceeded against its agent, Fry, with the same counsel of record.

This case was tried before his Honor Judge McKenna, beginning upon April 12th, 1895, and occupying something over a week in duration of time. At the close of the testimony the Singer Company asked the court to instruct the jury to find for defendant, and the court so granted such instruction, and as appears by his opinion, based upon the ground that under any rightful construction of the Cramer patent, the Diehl stand and treadle was not an infringement thereof; and judgment was thereupon entered for defendant. No further action of any kind was ever had or taken in that case. The judgment there entered remains to this day in full force and effect, and stands as a final judgment. The case is fully reported in 68 Fed. Rep., 201, the entire Cramer patent in suit being there present, as to drawings, specifications, and claims, and a drawing of the Diehl patent, representing the alleged infringing structure, being also reproduced and printed in full.

The petitioner, the Singer Company, alone defended this action against its agent Fry. Petitioner's answer in the present case sets up the judgment in the case against its agent Fry as a bar to the prosecution of this suit. The answer also discloses and sets forth the usual defenses in a patent case viz: Antecedent relative matter; want of patentability; denial of infringement; and the denial that the defendant in error, Cramer, has suffered any damage or loss of any description, etc. This suit was begun against petitioner, the Singer Company, upon the 8th day of October, 1896; its agent Fry was not joined as a party defendant in this action. The first trial of the present case was before his Honor Judge James H. Beatty, of the Idaho District, sitting as Circuit Judge in the Northern District of California. That trial also extended over a week's duration of time, and at the close of the testimony, the court instructed the jury to find for the defendant upon the ground that the petitioner, the Singer Company, alone conducted the defense in the suit against its agent Fry, in the suit above indicated; that the only act and proof of infringement in that case was the presence of the Diehl stand and its sale; and the only act of infringement in this case was the admitted fact of the manufacture and sale by petitioner of this stand and accompanying treadle; and that the petitioner was protected by, and would have been bound by, any judgment in that case. (Rec., p. 13.)

Judge Beatty, however, went further and stated that had he not decided the case upon the rule of law, as above applied by him, he would have given the instruction to find for defendant, the Singer Company, upon exactly the same ground as his Honor Judge McKenna, and would have so given it independent of, and uninfluenced by, that

decision. (Petition for Writ, pp. 6-7.) The case tried before his Honor Judge Beatty was taken to the Court of Appeals for the Ninth Circuit by the defendant in error, Cramer, and that court reversed the judgment upon the sole ground that it had not been sufficiently proven, and did not sufficiently appear upon record that the defense made by the petitioner, the Singer Company, in the case against its agent Fry, was an open defense, known to Cramer. The Court of Appeals made no reference whatever to the merits of the case other than upon this one point, the decision of the court being published in 93 Fed. Rep., 630. There was no discussion, even, as to any other prposition or defense in the record, other than as to whether or not the judgment of his Honor Judge McKenna was *res judicata* as to the Singer Company. Immediately upon the filing of this opinion, the petitioner, the Singer Company, applied to this court for writ of certiorari, upon the ground that it appeared plainly upon the face of the record that the defense of its agent Fry was an open, and not a secret defense. This petition was denied by this court without opinion upon October 30, 1899. (175 U. S., 725.)

The case was then returned by mandate to the Circuit Court, and was again, and for the third time, tried at the circuit, by jury, in the months of March and April, 1900, with the resulting judgment in favor of respondent Cramer for $12,456.00. The Singer Company then took the case by writ of error to the Court of Appeals for the Ninth Circuit, upon various exceptions taken and entered at the trial at the circuit. The case came on for hearing before the Court of Appeals for the Ninth Circuit, and shortly thereafter the judgment was affirmed by that court. (Rec., p. 464.) A petition for rehearing was filed

in the Circuit Court of Appeals for the Ninth Circuit, and same was denied. (Rec., p. 465.) Thereupon, the petitioner, the Singer Company, filed its petition for writ of certiorari, upon the 31st day of December, 1901, and upon the 21st day of January, 1902, it was allowed by this Honorable Court. (Rec., p. 467.)

Classification and identification of exceptions and instructions given and refused.

Sixty-eight exceptions were taken in all at the trial; were contained and present in the record below, and are here present in this court. Five of these exceptions were taken to the overruled defendant's objections to asserted relevant testimony of petitioner's witnesses. Five exceptions were taken to excluded testimony offered by petitioner. Exceptions 13 to 56 inclusive were taken to the refusal of the court to give instructions requested by the petitioner. These exceptions appear in full in Record, between pages 400 and 427. Those exceptions which were taken to the giving of certain instructions of the court to the jury, constitute the remaining exceptions appearing in this record, and appear in full on pages 427 to 432 inclusive.

The instructions requested by the petitioner, the Singer Company, and refused by the court, appear in full on record pages above referred to. Those instructions that were excepted to by the petitioner, the Singer Company, and given by the court, are found in record between pages 427 and 432.

The lengthy and complete charge of the learned trial judge at the circuit, appears in full on Record pages 417 to 427, and the petitioner's assignments of error, pages 434 to 452 inclusive.

Upon the presentation of this case we beg leave to rely upon all of the errors alleged jointly and severally, although in the presentation of the case we shall present them, massed or in groups, as bearing upon two or three salient and controlling rules of right and decision in this case and so relied upon by petitioner. We believe it will be more satisfactory to court and counsel to hereafter for the most part speak of the plaintiff in error as the Singer Company and the defendant in error as Cramer.

The subject-matters of refused instructions, eleventh and twelfth, represent and stand for the initial strain of the case.

At the close of the defendant in error's testimony, and at the close of the testimony of the plaintiff in error (petitioner), petitioner's counsel moved the court to instruct the jury to find and return a verdict for the defendant in error, upon the ground of non-infringement (Rec., p. 394), as represented by the eleventh refused instruction. Petitioner (plaintiff in error) then requested the court to instruct the jury that "under the construction of the patent as given by the court no infringement exists, and your verdict must be for the defendant." The court refused to give this instruction, and such refusal represents the twelfth exception. (Rec., p. 400.)

Under any rightful construction of the Cramer patent as to the first sole relied upon claim, both of these instructions should have been given.

There is such identity as to subject-matter between these two exceptions 11 and 12 that they can be discussed, and indeed should be discussed and presented at the same

time in the same argument. Such cotemporaneous discussion seems to be not only proper as a labor-saving proceeding for court and counsel, but also tends to clearness of understanding. Manifestly, also, as to one of the exceptions, it will be necessary to refer to much of the testimony present in the record, to establish the rightfulness of the exception. Again, these exceptions are first presented for discussion because it is clear that if your Honors find them rightful and well taken, such finding will end the case, and it will be no manner of consequence whether the other exceptions are material or not.

The proposition is axiomatic, as we understand it, that the construction of a patent is solely a matter of law for the court.

The rule of construction is no wise different, we take it, in an action at law upon a patent before a jury, than in an equity case before a court. In the case of *Heald* v. *Rice*, 104 U. S., 737, we find the rule stated by this court, as follows:

> "If it appears from the face of the instrument that explicit evidence is not needed to explain terms of law, or to apply the descriptions to the subject matter, so that the court is able from mere comparison to see what are the inventions described in it, and from such comparing that they are not the same but different, *then the question of identity is one of pure construction and not of evidence, and consequently is a matter of law with the court, without any auxiliary matter of fact to be passed upon by a jury if the action be at law.*"

The rightful and only construction that we believe can be given to this first claim, on the face of the patent itself—the rule of law as to such construction, and the duty of the patentee as to statement of invention and claim in his patent.

As a condition precedent to the granting of the patent, and as a binding rule upon the patentee thereafter, and as a protection to the public during the life of the patent, Section 4888 of the Revised Statutes is authoritative and controlling, such section being as follows:

> "Sec. 4888. Before any inventor or discoverer shall receive a patent for his invention or discovery, he shall make application therefor, in writing, to the Commissioner of Patents, and shall file in the Patent Office a written description of the same, and of the manner and process of making, constructing, compounding, and using it, in such full, clear, concise, and exact terms, as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound and use the same; and in case of a machine he shall explain the principle thereof, and the best mode in which he has contemplated applying that principle, so as to distinguish it from other inventions; and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery. The specification and claim shall be signed by the inventor and attested by two witnesses."

This section is substantially identical with the section of which it is a revision (Act of 1836) except that the Act of 1836 provided that the inventor "in case of any machine shall fully explain the principles and the *several modes* in which he contemplated the application of that principle, or character, by which it may be distinguished from other inventions."

It will be seen that the Section 4888 centralizes and makes much more certain the obligation of the inventor as to the public, in this: That instead of generalizing and stating several modes in which he contemplated the application of the principle, etc., he is now required in the case of a machine, after explaining the principle thereof, to explain the *"best mode"* in which he contemplates applying such principle.

It may seem somewhat elementary to quote this clause of the Revised Statutes, but in view of the decision of the Court of Appeals, to which the writ is directed, we deem it at least precaution to recite the fundamental provision by reason of which alone this patent exists.

The courts at the several circuits have at times been somewhat lax in their construction and application of Section 4888, and its binding effect upon patentees. As we read the decisions of this court, however, from the first to the last decision, patentees have been held rigidly to this clause of enactment, and the effect thereof, in the statement of their inventions and the statement of their claims. As we read the cases also there is no class of cases or patents in which this court has more rigidly enforced and applied Section 4888 than in those cases, and concerning those patents, which relate to "*improvements*" and "*combinations*" forming the subject-matter of letters patent.

We beg leave to refer to two or three decisions of this court bearing directly upon this subject, and have taken the liberty of italicizing certain statements appearing therein, for more particular emphasis in distinguishment from other statements in the quotation, and from parts hereafter quoted relating to analogous subject-matter to be discussed.

As early as the year 1818 Chief Justice Marshall of this court, in the case of *Evan* v. *Heaton,* 3 Wheaton, 454, speaking as to this precise subject-matter says:

> "In all cases where *his claim is for an improvement on a machine, it will be incumbent upon him to show the extent of his improvement so that a person understanding the subject may comprehend distinctly in what it consists.*"

Later, in the case of *Grant* v. *Raymond,* 6 Peters, 248, this great Chief Justice thus states the rule of law:

> "This case affirms the principle that a failure on the part of the patentee in those prerequisites of the act which authorize a patent, is a bar to a recovery in an action for its infringement, and that the validity of this defense does not depend on the invention of the inventor, but is a legal inference upon his conduct."

Again, in the case of *Gill* v. *Wells,* 22 Wall.. 25, this court says:

> "Where the ingredients are all old, the invention in such a case consists entirely in the combination, and the requirement of the Patent Act that the invention shall be fully and exactly described applies with as much force to such an invention as to any other class, because if not fulfilled all three of the great ends intended to be accomplished by that requirement would be defeated. They are as follows: (1) That the Government may know what they have granted and what will become public property when the term of the monopoly expires. (2) That. licensed persons desiring to practice the invention may know, during the term, how to make, construct, and use the invention. (3) *That other inventors may know what part of the field of invention is unoccupied. Purposes such as these are of great importance in every case, but the fulfillment of them is never more necessary than when such inquiries arise in respect to a patent for a machine which consists of a combination of*

old ingredients. Patents of that kind are much more numerous than any other, and consequently it is of the greatest importance that the description of the combination, which is the invention, should be full, clear, concise, and exact."

Let us now see, in the light of these decisions, what construction must be put upon the Cramer patent *on the face of the patent itself,* and as there defined and made certain by the patentee himself.

The Cramer patent occupies two printed pages of the Record (33-34), with a single sheet of drawings oppositely facing and immediately preceding page 33. The patentee, Cramer, in his opening statement, says that he has "invented a new and improved Sewing Machine Treadle," and then states that his entire patent, as to drawings and specifications "is a full, clear, and exact description of the same." The patentee immediately thereafter speaking, particularly and with exactness as to his invention, says:

> "My invention relates to *improvements in the bearings of sewing machine treadles;* and has for its object to provide means, first, to keep the treadle-bearings rigidly in line and at a fixed distance apart to avoid friction, and second, to make its movement in use noiseless."

And then that there can be no possible mistake as to in what, and to what his invention relates and consists, after stating the general objects thereof as above, he says:

> *"To this end my invention consists in the construction and combination of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, etc."*

Figure 1 of the drawings the patentee says is "a perspective view of a portion of a sewing machine, showing my invention." It will be noticed that in Figure 1 the

parts relatng to the invention upon the right side of the drawing are broken away so as to show itemized and in detail the invention of the patentee Cramer, and that the patentee was not entirely correct in saying that "Figure 1 is a perspective view of a portion of a sewing machine" showing his invention. Figure 2, however, of the drawings does show the invention of the patentee Cramer as he defines it, namely: "My invention relates to *improvements in the bearings* of sewing machine treadles."

Cramer says in his patent that the "Figure 2 is a transverse vertical section through *one bearing* of the treadle."

The patentee then goes on to describe particularly the construction and combination of parts in which, as above stated, he declares his invention consists, identifying the same by lettered parts, and particularly descriptive matter. He says:

> "*A represents the treadle* provided with the usual pitman-connection by which to run the sewing machine wheel. *B represents the two trunnions, cast as a portion of the treadle and extending from its sides into loop-holes in the common cast-iron cross-brace C. These trunnions are sharpened to an edge or corner along their lower sides, and the lower end of the loop-hole is hollowed to an angle more obtuse than the edge of the trunnion, to serve as a bearing for the same and permit the rocking motion common to treadles.* C represents the usual cast-iron double brace connecting the two end legs diagonally in a plane generally vertical. The lower ends of this brace are secured directly to the web of the legs by bolts *d*, and *for convenience and strength I make the two ends of the common cross-bar D, serve as these bolts.* The upper ends of the brace are secured, as usual, either to the web of the legs or to the table of the machine, near the legs."

It will be noticed that this last description professes to be simply a statement of a common and well-known form

of parts connecting the two legs of the sewing machine, and the old common cross-bar called "D," found in every sewing machine; the patentee suggesting that the old vertical brace can be held in position and place by utilizing the old cross-bar of the machine as a bolt.

Keeping in mind that the patentee has said that his invetion relates to "improvements in the bearings of sewing machine treadles," the next statement is significant; in this, that he particularizes and designates what he means by his inventions or "bearings," as follows:

> *"The treadle and its trunnion-bearings* are wholly independent of the cross-bar D, *except its service, as stated, to hold the brace to the legs. The bearing-holes in the brace are formed into long vertical loops to permit the entrance of the treadle."*

It will be seen so far, that the improvement in the bearings of the patentee consists of the treadle of the sewing machine cast with two trunnions particularly pointed out and designated as "B" in the specifications and drawings, which extend from the sides of the treadle, and which trunnions are sharpened to an edge or corner along their lower sides, and are placed in or dropped into "long vertical loops" in the down hanging ends of the vertical cross-brace, which are shown specifically as to location, formation, and construction, in Figure 2, which the patentee Cramer says is a "transverse vertical section through one bearing of the treadle;" or, as otherwise stated, "is a transverse vertical section of his invention."

The proportion and relation of these trunnion-bearings to the long vertical loops, and the specific object and function of the loop-holes, and of the trunnion rocking therein, is clearly shown in this Figure 2. It is seen that the patentee's treadle is permitted entrance into these long vertical loops by reason only of their peculiar loop construc-

tion. It requires neither the testimony of a mechanical expert, or even of ordinary mechanical skill, to see that when the treadle of this patent with its sharpened trunnions is dropped into these long vertical loops, that such treadle has free play in every direction, vertically and laterally, when in operation; and this fact is not only apparent from the drawing but is recognized and made certain by that part of Cramer's specification next following, and the means resorted to by Cramer to prevent free movement in every direction of this loosely deposited treadle resting upon its sharpened trunnion edges in the loop.

The broken away portion of the lower end of the cross-brace showing in detail the *invention* of the patentee; *i. e.*, his "*improvement* in *the bearings* of sewing machine treadles," is shown in the lower right hand corner of Figure 1, and is thus described particularly in his specifications:

> "Pieces of leather F, or other soft material cover the top and end of each trunnion, *to serve as cushions to keep the same close in its bearing, to prevent the noise which would result were the trunnions permitted to bounce and thump end-wise, when the treadle is in motion.* The leather F is fitted to the curve of the upper side of the trunnion, which is an arc of a cylinder whose center of oscillation is the lower edge of the trunnion. The same leather also interposes between the end of the trunnion and the adjacent iron. *f* is a block serving as a mere backer, to which the cushion F is attached. This block conforms to the back and top side of the cushion and fills the loop-hole in the brace above the trunnion. It also has tangs or projections *e*, resting in suitable recesses in the brace C, which are held between the brace and the web of the leg E, by which means the block and cushion are held in place."
>
> "*Below the bearings of the trunnions B*, I provide cups, M, attached to the ends of brace C, to catch

the oil that usually drips from *such bearings. By this construction my treadle bearings are rigidly fixed, and in no way liable to get out of line, or to require adjustment. The usual noise is prevented,* and overflowing oil is caught before it can do damage."

The patentee then states as the closing paragraph of his specification that

> "I am aware that sewing machines treadles have before been provided *with V shaped bearings,* and I do not claim the same as my invention."

This is the only disclaimer in the patent as to the several parts connected with Cramer's invention *"as to his construction and combination of parts;"* and the reason of such disclaimer will appear further along in the second clause of discussion of the construction of this patent and claim.

Cramer closes the specification of his patent by the statement

> *"What I claim and wish to secure by letters patent,* is" then follows claim 1, the foundation of this suit.
>
> "1. The vertical double brace joining the legs of the two ends of a sewing machine, *provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings, substantially as specified."*

It would really seem that a patent so accurate and specific in its specifications, so clearly illustrated in its drawings, and so concisely and clearly stated as to identification of invention by the claim, is incapable of any misunderstanding or misconstruction as to intention and meaning of the patentee. There is nothing of ambiguity in any statement of this patent as to the invention intended.

There is nothing of obscurity in the drawings forming the pictorial illustration of the invention, and it apparently would be a matter of no difficulty to compare any mechanical construction and combination of parts representing the bearings of any sewing machine treadle with this Cramer patent and claim, and by such comparison alone determine whether or not the invention of Cramer's bearings and treadle is present in the compared device.

The question of infringement of the Cramer patent, construed on its face, by the Singer Company's machines.

This court long ago declared that a question of infringement is best determined by the court by such comparison *Seymour* v. *Osborne*, 11 Wall., 517. Or as so aptly stated in the decision of this court in *McCormick* v. *Talcott*, 20 How., 209, as follows:

> "This court has had before them a species of evidence of all others best calculated to conduct them to the truth—evidence superior to, and unaffected by the interests or prejudices of partisans, or by the opinions (the reveries, they may often be called) of a class of men styled experts; men as often skillful and effective in producing obscurity and error, as in the elucidation of truth. No witnesses can testify so clearly and so impartially as do the subjects (though mute) concerning which a controversy about identity or dissimilarity is pending."

The alleged infringing structure of the Singer Company (petitioner) relates only to a single uniform identical mechanical construction, without variation or change of any description as to any of the parts one from the other, in separate sewing machines. While the actual Singer machine itself is present here as "Plaintiff's Exhibit P,"

(Rec., p. 55), yet as a matter of fact, the Singer machine as here involved is represented, by, and made under certain letters patent granted Philip Diehl, under date of October 14, 1884, numbered 306,469, for a new and useful improvement in sewing machine stands and treadles. This Diehl patent is in evidence, printed upon record pages 85 and 86 with two sheets of drawings oppositely facing such pages. It appears by the record that this Diehl patent is identical, as to construction of the parts there shown, with Plaintiff's Exhibit P. (Rec., p. 86.) Sheet 1 of the drawings of the Diehl patent exhibits the Singer Company's exact device proceeded against as an infringement.

We herewith produce for convenient reference and comparison, upon oppositely facing pages of this brief, the single sheet of drawings of the Cramer patent with its two figures showing his invention in detail; and the drawing upon sheet 1 of the Diehl patent, showing the Singer Company Stand and Treadle; the asserted infringement of this case.

H. CRAMER.

TREADLE FOR SEWING MACHINES, &c.

No. 271,426. Patented Jan. 30, 1883

Fig 1

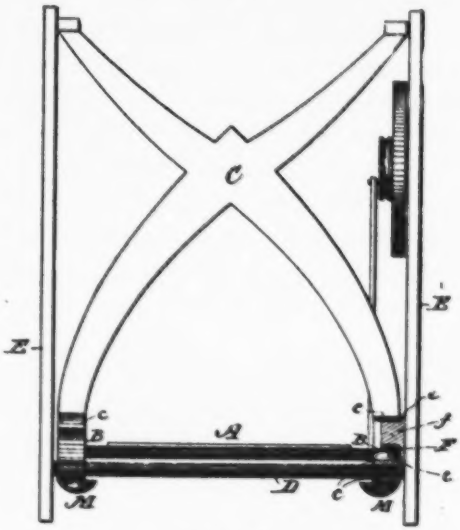
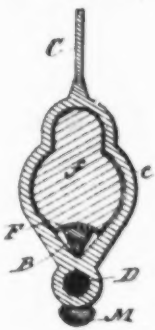


Fig 2



WITNESSES:

H. B. Brown

W. X. Stevens

INVENTOR:

H. Cramer

BY Munn & Co

ATTORNEYS.

P. DIEHL.

SEWING MACHINE STAND AND TREADLE.

No. 306,469. Patented Oct. 14, 1884.

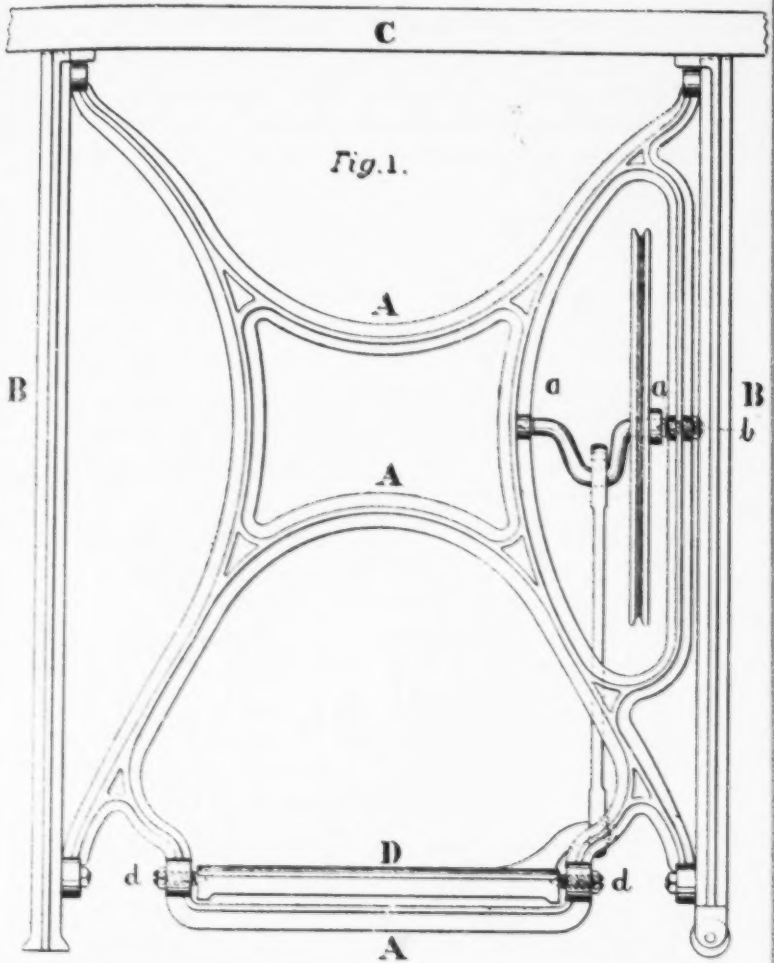


Fig. 1.

WITNESSES:

Chas. Klein

Angelo Bonaman

INVENTOR

Philip Diehl

BY Sydney A. Barnes

his ATTORNEY

It will tend, also, to clearness of understanding upon the question of infringement for the court to know accurately the intention, purpose, and result of the particular device represented upon sheet 1 of the Diehl patent.

It is without dispute that vertical double braces were old, joining the two end legs of a sewing machine, long prior to the date of the Cramer patent. This fact is recognized on the face of the Cramer patent, where, he says: "C represents the usual cast-iron double brace connecting the two end legs diagonally in a plane generally vertical." It was old and common long prior to the date of the Cramer patent in sewing machines to connect and lock fast together the lower end of such legs by a "common cross-bar." This fact is also recognized on the face of the Cramer patent, the bar is there shown, and is referred to as a "common cross-bar D."

Diehl says that his invention is a new and useful improvement in "Sewing Machine Stands and Treadles," and he thus states and particularizes his invention:

> "My invention relates to an improved construction in sewing machine stands and its object is to secure a permanent and reliable support and adjustment *for both the band-wheel and treadle* and to preserve their respective relative positions, so that they will always co-operate to produce the best results with the least danger of friction or binding."

The patentee says that Figure 1 of the drawings is a "face view of such stand within which I support both the band-wheel, crank and treadle."

The patentee Diehl then describes fully the construction of this brace, and its particular purpose, as follows:

> "This brace is formed, substantially as shown, with a loop within which the band-wheel can act, and on the sides of which are provided conical bearings

for the shaft which supports the band-wheel, and which is preferably bent so as to form a crank. To this crank is attached an ordinary pitman, which at its lower end is pivotally connected to an ordinary rocking treadle. This treadle is supported in the lower portion of said brace, which I prefer to make as shown, forming practically another loop, the lower end of which is the cross-bar on which the treadle is hung. This cross-bar may however be omitted, and the treadle hung directly on downward projections from the brace."

The patentee then states with great particularity and conciseness, the essential part and object of his invention, as follows:

"The essential part of my invention being the providing of supports for both the band-wheel and the treadle, which are integral with the brace, so that when said band-wheel, with its driving-crank and said treadle, have been hung within said brace and connected by a suitable pitman, their adjustment to and relationship with each other are practically permanently secured."

The defect and difficulty that Diehl was trying to remedy is at once apparent after reading his patent, by reference to the Cramer patent. Cramer says in his patent that he represents his treadle "A" provided with the usual pitman connections by which to run the sewing machine wheel. The pitman is there shown, as is also the sewing machine band-wheel journaled to one of the end legs of the sewing machine. This band-wheel is of course one of the most important parts of a sewing machine. It constitutes a fly-wheel, and driving mechanism to operate the entire machine. That this band-wheel should run smoothly and evenly without vibration, is essential to the success of a machine. It can be at once seen upon an examination of the Cramer drawings that in the old ma-

chine there was no fixed relation between this band or driving-wheel, and the operating treadle; the strain was entirely upon one side of the wheel, and the pitman alignment was uncertain; and the two parts (treadle and band-wheel) without capability of fixed relation to each other. The Diehl patent obviated this difficulty, and the means and structure employed for so doing is the invention in the Diehl patent.

It will be seen at once upon inspection of the drawings of Sheet 1, that what Diehl did, was to cast the old "usual cast-iron double brace," and the "old common cross-bar D" into a unitary structure; and casting therewith a supplemental loop in which to hang the driving-wheel, and its crank. This loop was so cast as to assure a permanent alignment between the crank shaft and the operating treadle, and the holding in fixed relation to each other of the band-wheel, driving crank and treadle, when in operation and when adjusted to such relationship thereby permanently secured and incapable of displacement. There was no other object in placing the treadle on the cross-bar in the Diehl patent except to produce this result; and there was no other object in placing the band or driving-wheel, and its driving crank in the loop in relation to such treadle, except to produce this result.

It will be seen at once that the device of the Diehl patent represents and stands for, and is, a concrete unit structure, that permits of the band-wheel, crank and treadle being placed in permanent position and alignment, and adjusted in relation to each other before being placed in, or allied with the stand of the machine; and this result is brought about by casting the old, common cross-brace, and the old common cross-bar together as a unitary structure, and having cast additional therewith a loop, and so

cast in its relationship to the treadle that when the treadle upon the cross-bar, and the band-wheel in the loop of the cross-brace are in position on their fixed supports, their "*relationship with each other are practically permanently secured.*" This construction has practically and commercially several advantages; in this, that it permits of this relationship being fixed before the combined cross-brace and cross-bar, with its driving-wheel, pitman, and treadle connections are sent out to the trade; and the retail dealer has only to ally this unitary structure with the stand to assure the desired results. The disadvantage of this construction is that if any part of the cast unitary structure is broken, the entire structure is destroyed. While nothing is said about it in the Diehl patent, it would seem that the casting together of the old usual cross-brace and cross-bar, with its supplemental loop, as shown in the Diehl patent, with the band-wheel is a matter of much difficulty, and really stands for the perfection of the casting art.

The nicety and accuracy of the adjustment between the driving-wheel, crank shaft, pitman, and treadle, in the Diehl patent is shown by the fact that such adjustment is so perfect that there is no means of disturbing the adjustment thereafter, except by the ordinary wear of the bearing parts, and this regulation is provided for, and the adjustment made positive by the conical bearing set screws, shown in drawings, and described in the specifications for that purpose.

No possible relationship exists between this Diehl construction and the construction and invention of the Cramer patent, either as disclosed by the specification or identified by the single relied upon claim.

There is not a line or word of description in this Cramer patent which is descriptive of or applicable to this Diehl construction, except the statement as to the usual cast-iron double brace, and the common cross-bar, admitted to be old in all sewing machine stands. Every word and line of the specifications of Cramer as to the remaining parts of his *"construction and combination of parts"* is without any semblance of parallelism, resemblance or analogy to the Diehl stand and treadle; and Cramer's first single relied upon claim has carried into it the peculiar "construction and combination of parts" described in the specifications. Here again is Cramer's first claim italicized as to every element and mechanical part identified thereby, aside from the "usual double vertical brace."

> "1. The vertical double brace joining the legs of the two ends of a sewing machine *provided with holes through its lower extremities to serve as bearings* in combination with a treadle *provided with trunnions fitted to oscillate in said bearings, substantially as specified.*"

Here we have exactly, precisely, particularly itemized, and in detail, Cramer's invention, consisting in its "construction and combination of parts," as solemnly declared in his patent.

In the Diehl device there are no holes of any kind, name, or description, through the lower extremities of the double brace *to serve as bearings*, the only holes being the old holes always present to bolt the brace to the legs

of the machine. In the Diehl device there is no double vertical cross brace *with holes through its lower extremities in combination with the treadle provided with trunnions.* In the Diehl device there is no vertical double brace *provided with holes through its lower extremities to serve as bearings in combination with a treadle, "provided with trunnions fitted to oscillate in said bearings, substantially as specified."* In the Diehl device there are simply no holes in the vertical cross-brace, or anywhere else, that serve as bearings. In the Diehl device *there is no treadle provided with trunnions of any description, much less trunnions fitted to oscillate in bearings of any description in the lower extremities of the cross-brace.* In the Diehl device, as above stated, the old, usual, vertical double cross-brace, and the old common cross-bar, are cast as a unit structure. Indeed, in the Diehl device, were it not for the band-wheel being located in the loop, you could dispense with the vertical cross-brace entirely, cut it off and take it out of the machine, and still have the old common cross-bar, and the treadle mounted upon it.

The treadle in the Diehl device has no connection whatever with the vertical double cross-brace, but is mounted in said cross-bar. This fact was so recognized by the Patent Office, and is so stated in the specifications and evidenced by Diehl's fifth claim, which is:

> "A cross-brace for sewing-machine stands, *having at its base a cross-bar, combined with a treadle mounted in said cross-bar,* substantially as set forth."

In the Diehl device his treadle is "mounted in" said cross-bar by off-sets in such bar, extending through which are conical point center screws passing into recesses in the sides of the treadle, and rocking and oscillating thereon, with its defined alignment with the band-

wheel and crank; the Diehl treadle is not only without trunnions of any description, but the presence thereon of trunnions, as provided for in the Cramer patent, would render the treadle worthless and inoperative. As a unit structure the casting of the old usual double vertical brace, and the old common cross-bar with the band-wheel carrying loop, as shown in Cramer's patent, made as to resulting structure an entirely new combined cross-bar and brace, and such new composite containing and carrying brace was an essentiality in producing an assured and permanent relation of the band-wheel and treadle with the results following therefrom, as shown in the Diehl patent. The attempt to utilize in this new brace any of the features or "construction and combination of parts" described by Cramer as his invention would manifestly have destroyed the entire utility of the structure itself. So long as the English language has in it the meaning attributed only to it as represented by the words of Cramer's patent, just so long is it certain that the structure of the Diehl patent and device is without any possible relationship or parallelism of "construction and combinationo of parts" to the Cramer patent asserted by him to be his invention. The claim of the Cramer patent provides distinctly as one of its elements of construction *that the holes through the lower extremities of the vertical double brace are to serve as bearings.* There are simply no such holes in any part of the composite brace of the Diehl structure; and this, irrespective of the fact that the holes through the lower extremities of the Cramer brace to serve as bearings, are peculiar in their character, and have a specific function attributed to them that of necessity is the essence of their construction and invention, in this, "that the bearing holes of the brace are formed into long vertical loops to permit the entrance

of the treadle." Of necessity the bearing holes in the extremities of the Cramer brace must be of such length as to loop to permit the entrance of the treadle, and this is what is meant as to the specific matter in the first claim by the words "substantially as specified."

Even the word *"through,"* as appearing in Cramer's first claim, is a word of limitation descriptive of the necessary condition and construction of the lower end of his cross-brace; for unless Cramer's loopholes extended *"through"* the lower ends of his cross-brace the backing and cushion block could not be put in place.

No holes of any kind appear in the Diehl device except such as to permit the entrance and passage of the fixed bolts.

Again, Cramer provides in his specifications that his treadle is provided with two trunnions, and that such trunnions are *"cast as a portion of the treadle;"* and that these trunnions extend *"from its sides into loop holes in the common cast iron cross-brace."* The Diehl treadle, without cavil or question, is absolutely without trunnions of any description, and is the exact antithesis of this element of construction of the claim of Cramer's patent. Two small conical recesses appear in the side of the Diehl treadle upon which the treadle rocks upon point center screws, and the only possible resemblance between the treadles is that they both rock or oscillate; and this fact is inconsequential, because they would not be treadles if they did not have this movement, and such movement was old long before Cramer's day or date. Again, the Diehl treadle is hung in the old common cross-bar, and not in or on the old vertical cross-brace, and Diehl's suggested construction of omitting the cross-bar is not presented here for consideration.

We therefore respectfully submit that upon the face of the Cramer patent itself, as it must be construed by the court, there can be found no possible identity or infringement of the controlling words of identity and limitation of the claim, and that, as stated by Cramer, his *"invention consists in a construction and combination of parts hereinafter fully described and claimed."* It is simply impossible from this Cramer patent, construed on its face, that there can be found any infringement thereof by the Diehl device, admittedly alone standing for the Singer Company's construction.

The rightful and only construction that we believe can be given to Cramer's first claim, in view of the facts disclosed and fixed by the file-wrapper and contents of his patent.

No rule of law is more firmly established by this court, as we understand it, than the rule that to determine the rightful construction of a patent, resort may be, and in certain cases must be, had to what is termed the "file-wrapper and contents" of the patent itself; or otherwise expressed, that the statements made by the patentee, or his attorney, in, or as to the original amended or substituted specifications filed in the Patent Office before the final grant of the patent—all actions of the Patent Office thereon, and the communications of the patentee personally, or by his attorney, made to the Patent Office in relation to his invention or claims—may, and at times must be, considered in determining in what the invention consists, and limiting and defining such invention as to statement and claim; and that the statements of the patentee made in the Patent Office in connection with, or as controlling statements in the grant of his patent, must be

strictly construed against him, and in favor of the public, and stand as matters of disclaimer.

This court thus states the rule in the case of *Sargent Co.* v. *Lock Co.*, 114 U. S., 86:

> "In patents for combination of mechanism, limitations and provisos, imposed by the inventor, especially such as were introduced into an application after it had been persistently rejected, must be strictly construed against the inventor, and in favor of the public, and looked upon as in the nature of disclaimers."

The rule as to statements made in the file-wrapper and contents as defining the scope and effect of a patentee's claims is thus stated by this court in the case of *Sutter* v. *Robinson*, 119 U. S., 540:

> "A comparison of the patent as granted with the application very conclusively establishes the limits with which the patentee's claims must be confined."

Upon the 25th day of May, in the year 1882, Cramer filed his application in the Patent Office for the letters patent involved in this suit. We take it that there can be no contention but that what Cramer thought he had invented, what he intended to invent, and what he actually invented, is best disclosed by his application as originally filed; and that he will not be permitted seventeen years afterward to contradict the plain terms of his application or to insist that such meaning be given to it as will sweep in and embrace a mechanical structure having none of the qualities or characteristics of any invention described in the specification, shown in the drawings, or set forth in the claims. It is evident, on examining Cramer's original application filed May 25th, 1882, that such application was in all probability written by himself personally. It is just such a specification as is

usually lodged in the Patent Office by a party supposing himself to be an inventor. Whatever may be the crudeness of this specification, it is certainly evident that Cramer then in the original application knew what he invented, and knew what he intended to claim. This original application appears in Record, pages 195-6.

This application of Cramer is so short, terse, and to the point, and so controlling as to all after changes made therein by his solicitors, that we herewith quote it in full:

> "I, Herman Cramer, of the city of Sonora, in Tuolumne county, in the State of California, have invented certain improvements in a treadle, to be used in sewing machines, or other machinery where a noiseless treadle may be required, of which the following is a specification:
>
> "My invention consists of the usual platform marked 'A' in Fig. 1 of diagram on treadle bar. The ends of said treadle bar, marked 'B' are shaped like the letter V and rest in socket in lower end of a brace 'C', the socket being ♥ shaped, the brace 'C' cast in one piece, and the treadle bar and platform on the bar is also cast in one piece.
>
> "The treadle bar rests in socket in brace 'C', which is immediately above a cross-brace usually in machines to keep them from spreading apart, the nut on end of cross-brace is marked 'D.' Letter 'M' immediately beneath cross-brace and treadle bar is an oil-receiver to retain any drippings of oil from the bearings of treadle bar.
>
> "My invention consists in having the ends of the treadle bar V-shaped to fit in hole in brace 'C', also ♥ shaped to receive the ends of the treadle bar.
>
> "This V-shaped treadle bar in brace 'C' entirely prevents noise from the treadle, is self-adjusting and does away with the necessity of cones and set-screws now in use. This I claim as my invention. Fig. 1 represents platform 'A' and treadle bar, the ends of which are V-shaped and marked 'B.'
>
> "Fig. 2 represents the lower end of brace 'C' with

hole ♥ shaped to receive the ends of treadle bar 'B.' 'D' represents nut on end of cross-brace immediately below treadle bar.

" Witnesses: HERMAN CRAMER.
" FRANK W. STREET.
" CHARLES L. STREET."

In his oath made following this specification (Rec., p. 196), and so that there can be no mistake as to what the patentee actually had invented as stated in his specification, he says in such oath that he verily believes himself to be the "original and first inventor of *the improvement in noiseless self-adjusting treadle described in the foregoing specification.*" This is the only invention in the oath that he says he made, or is disclosed by the specification.

It is perfectly evident from this specification, aside from the oath that what Cramer thought he had invented and produced by his peculiar and particular combination was a noiseless treadle," and as stated in his application "to be used in sewing machines, *or other machinery where a noiseless treadle may be required;*" and his invention was to bring about this result by the particular and peculiar construction of mechanism described in his specification and shown in his drawings. It is entirely evident, also, that this "noiseless treadle" was produced by reason of the V-shaped treadle-bar resting and rocking in the peculiar heart-shaped openings or sockets in the lower end of the brace, with the muffler alliance mentioned in the specification, and shown in the drawings. The treadle-bar was self-adjusting by reason of its V shape and the peculiar trough in which it rested and rocked, because, as either the V-shaped bar or the trough wore away by use, such wearing permitted the treadle-bar to adjust itself to the trough under all conditions,

and with the muffler attachment shown, "entirely prevents noise from the treadle;" and so that there can be no mistake as to his invention in his first application, irrespective of his oath, after describing the above particular and peculiar shaped construction and combination, he says, *"This I claim as my invention."*

Cramer's first specification contained no formulated claim of his invention, and under the rules of the Patent Office was therefore an incomplete specification. Four days later, or upon the 29th day of May, 1882, the Patent Office wrote Cramer that his specification was not prepared in conformity with the rules of the Office; was written upon both sides of the paper, and was without appended claim; that the oath was defective; and also stated to Cramer that the Gregory patent No. 256,563, of April 18th, 1882, "exhibits the alleged invention." (Rec., p. 197.)

Upon August 3rd, 1882, Cramer sent to the Patent Office another specification in place of the "informal specification" rejected by the Patent Office. (Rec., p. 199.) Such specification appears upon Record pages 197-8. This specification is without substantial difference from the one originally filed, but restates his invention slightly in detail, with what he evidently intended to be an appended claim required by the letter of the examiner. This specification is short, and we herewith quote it in full:

> "Specification forming part of application filed May 25th, 1882, by Herman Cramer for sewing machine, etc.
>
> "I, Herman Cramer, of the city of Sonora, in Tuolumne County, in the State of California, have invented certain improvements in a treadle and brace to be used in sewing machines or other machinery

where a noiseless treadle may be required of which the following is a specification.

" My invention consists in a combination of the usual platform marked 'A', in Fig. 1 of diagram on treadle bar. The ends of said treadle bar marked 'B' are to bear against mufflers.

" The treadle-bar bearings are in and on brace 'C.' The treadle bar rests in socket in brace 'C' which is immediately above a cross-bar usually in machines to keep them from spreading apart. The nut on end of cross-bar is marked 'D.' Letter 'M' immediately beneath cross-bar and treadle bar is an oil-receiver to retain any drippings of oil from the bearings of treadle bar.

" The treadle bar, mufflers and brace 'C' are held between the right and left legs of the machine by means of a brace bar underneath the treadle bar.

" This brace and socket or bearing in or on brace is in one piece.

"The treadle bar with mufflers on the ends working or bearing in or on brace entirely prevents noise from the treadle is self-adjusting and does away with the necessity for cones and set-screws now in use.

"Fig. 1 represents platform 'A' and treadle bar the ends of which may be V-shaped or any shape to suit marked 'B'.

"Fig. 2 represents the lower end of brace 'C'.

'D' represents nut on end of cross-bar immediately below the treadle bar.

"What I claim is a combination of brace 'C' with socket or bearing in it or on it, to receive the treadle bar with the mufflers at the ends of treadle bar or in or on brace 'C' in connection with said brace 'C' and the treadle bar in connection with brace 'C' and mufflers to work in or on brace 'C' substantially as set forth.

"Witnesses: "HERMAN CRAMER.

CHARLES L. STREET.

FRANK W. STREET."

In this specification Cramer mentions specifically, and brings into prominence the mufflers of his patent, and

the part they play in the production and assurance of his "noiseless treadle." He says: "The ends of said treadle bar marked B are to bear against mufflers." . . . . "The treadle-bar, mufflers and brace 'C' are held between the right and left legs of the machine by "means of a brace bar underneath the treadle bar. . . . The treadle bar with mufflers on the ends working or bearing in or on brace entirely prevents noise from the treadle, is self-adjusting, and does away with the necessity for cones and set-screws not in use:" and the mufflers of his patent are made one of the particular elements of his claim.

We have then here not only the statement of Cramer as to his invention and in what it consists, but also his statement in claim form as to what is his invention, as required by the Patent Office; and it is entirely evident that this whole second specification, as did the first, relates to a "noiseless treadle" that was to be self-adjusting by use and wear, and it was to be made noiseless and adjustable by the peculiar character of its construction, and by the muffler devices illustrated in the drawings, and associated and allied therewith.

Cramer's second amended application and claim was rejected by the Patent Office upon the patent of Donovan, of June 28, 1881, No. 243,529 *"in view of which a patent is again refused."* (Rec., p. 198.)

The case then went into the hands of Munn & Company of New York and Washington, who, upon October 17, 1882, cancelled all the specifications above referred to of Cramer, *"except the signature"* and substituted therefor the specification represented by letters patent in suit. (Rec., pp. 199-200.) Accompanying this specification of Munn & Company was a letter from them, at-

tempting to meet the references to Gregory and Donovan, upon which the application had been rejected, by the following communication: (Rec., p. 201.)

> "Gregory, referred to, pivots the grooved trunnions of his treadle upon knife-edges secured within the upper loops of two collars, which are secured to the cross-bar by means of set-screws to keep them from turning. Donovan pivots his treadle upon its trunnions having sharpened edges, in grooves in the cross-bar, where it is held by collars provided with flanges projecting over the trunnions. *Applicant pivots his treadle upon the sharpened edges of its trunnions in loop-holes in the two ends of the brace* which is bolted to the legs of the machine by the two ends of the cross-bar. This service of the cross-bar might be as well performed by two short bolts; but the bar being a usual cross-tie to stiffen the legs, applicant uses its ends as bolts to hold his brace ends to the legs. *We have rewritten the specification to elucidate the inventor's claim.* Should the case meet with favorable consideration a new drawing will be furnished. For the purpose of examination see pencil sketch on sheet of drawing filed.
>
> "Your ob't servants,
> MUNN & Co."

This application of Munn & Company was again rejected by the Patent Office upon the references previously cited—"that of Gregory in particular meets the alleged invention." (Rec., p. 201.) Munn & Company replied to this objection as follows: (Rec., p. 201.)

> "The examiner will please notice that the applicant's invention places both bearings of the treadle in the cross-brace.
>
> "By this means they may be made perfectly true in line either by casting or drilling and they cannot be thrown out of line either by use or by the most awkward setting up.
>
> "Therefore, one source of friction is avoided. All the references have shown bearings made of two

separate pieces which could readily be set up out of line or even be worked loose. The advantage is obvious.

"A reconsideration is respectfully asked.

"Your obedient servants,

MUNN & Co."

It is entirely evident that the proposed conditions stated by Munn & Company in this communication, are wholely original with them; and nothing in Cramer's applications filed by himself in the first instance, and second by his first solicitors, contained or hinted at any such purpose or office of his special construction. Such communication is simply the legerdemain language of an expert patent solicitor hunting for differences of construction upon which to base a further request for the grant of a twice rejected application. And moreover, these supposed conditions referred to by Munn & Company in this last communication, can only be approximately secured as to any desired result, in the Cramer device, by using all of the particular elements described in Munn & Company's specifications for this especial purpose; namely, as to the trunnions *"to keep the same close in its bearing, to prevent the noise which would result were the trunnions permitted to bounce and thump end-wise when the treadle is in motion."*

It seems quite clear from these Patent Office record facts, that this patent is a sample of Munn & Company's patents where the true and right statements of the invention of Cramer has been simply so changed and limited as to form of expression that the Patent Office was induced to grant the patent by reason of the limitations imposed in such statements.

Munn & Company, at the date of the Cramer application, were doing a wholesale patent soliciting business,

and their rule of procedure seemed to be the obtainment of patents by reason of differences in eye appearance between mechanisms and peculiarity of construction. The fact that Munn & Company at once struck out all of Cramer's pending specifications *except signature,* and substituted therefor, a specification drawn by themselves, is ample evidence of this fact. Munn & Company's entire specification is built around the usual scheme of these solicitors to obtain a patent for a particular construction having some mechanical peculiarity, and evidently was intended to be so drawn as to escape the terms of the references cited, and to procure the patent by reason of such peculiarities of construction, or as stated by Munn & Company in their specifications in defining Cramer's invention "my invention consists in the construction and combination of parts hereafter fully described and claimed."

Cramer, without doubt, as shown by his first application, supposed he was the inventor of the V-shaped treadle bar *per se.* The references to the patents of Gregory and Donovan dispelled this illusion, and it had to be abandoned; but Munn & Company saw that V-shaped bearings, while not new *per se* with Cramer, were new in the particular manner of construction and alliance with the treadle, as shown by him, and were new in their application and association with the long vertical loops disclosed in the Cramer patent. Munn & Company saw that the V-shaped bearings used upon trunnions cast integral with the treadles, and extending from the sides of the treadle into the loop holes, was new with Cramer, and was not met by reference to either Gregory or Donovan. In the Donovan patent there is a treadle bar on, or with which the treadle is cast; but there must be an entire and distinct

treadle, and an entire and distinct bar; but in the Cramer patent there are simply two trunnions cast as a portion of the treadle, extending from its sides and sharpened to an edge or corner, along their lower sides.

None of the patents cited, or present, show this particular construction even, of the two trunnions cast as a portion of the treadle sharpened to an edge along their lower sides. None of the patents cited or shown in this record show the long loop-holes exhibited in the Cramer patent "hollowed to an angle more obtuse than the edge of the trunnion, to serve as a bearing for the same and permit the rocking motion common to treadles."

None of the patents cited or present exhibit any of the muffler devices particularly described in the Munn specifications, but not so called, and which Munn & Company say in their specification that "by this construction my treadle bearings are rigidly fixed and in no way liable to get out of line, or to require adjustment. The usual noise is prevented, etc."

Whatever reason there might have been that induced the examiner to change his mind and withdraw the record objection to this patent as shown, we do not know; but certain it must be that the examiner in granting this Cramer patent simply gave, and intended to give, Cramer the benefit of the doubt only, as to whether he was entitled to a patent, and to grant said patent to him only for a particular "construction and combination of parts, fully described and claimed," which he says was his invention. It will be noticed in this connection also, that in the specification as drawn by Munn & Company, and as here present, that the provision in the first specification, that the bearings might be *on the brace*, in distinction from in the brace, was eliminated; and that it is

provided in the specifications of Munn & Company not only that the long loop-holes should be *in* the brace, but that these "holes should extend *through* its lower extremeties" and this also is the first claim.

Again, while in the Cramer specification as filed, his invention of a "noiseless treadle" applied to all kinds of machinery; yet Munn & Company narrowed his specification so that his invention was to apply only to a "sewing machine," practically admitting thereby that there could be no claim for any such construction or combination "in other machinery where a noiseless treadle may be required."

There would seem to be no reasonable doubt at all that the Patent Office granted this twice rejected Cramer patent over the references cited by reason of the particularized and peculiar construction and combination of the parts exhibited; and by reason of the fact that Cramer in his patent so distinctly states as his invention, that without such particular and peculiar restrictions, as appear in the statement of invention, and as appear in the claim, this twice rejected patent would never have been allowed.

A most fair and liberal view to Cramer as to the effect of his statements in the Patent Office, and in his applications antecedent to the grant under the Munn & Company specification and their effect upon the right construction of the patent, is certainly found in the opinion of his Honor Judge McKenna, in the case of *Cramer* v. *Fry*, 68 Fed. Rep., 209, where the learned Judge says:

> "It will be observed that these proceedings all tend to making special the devices, and fixing their relations. It must be assumed, of course, that the technical language of the claim of the patentee was used technically. The double brace is provided with

holes to serve as bearings, and the treadle provided with trunnions having knife edges to oscillate in said bearings. What, then, is a bearing? It is defined by Webster to be in mechanics: (a) The part in contact with which a journal moves, as the journal boxes, trusses, etc.; (b) That part of the shaft or axle which is in contact with supports. To the same effect is Knight's American Mechanical Dictionary, only reversing the order: (a) The portion of an axle or shaft in contact with its collar or boxing; (b) the portion of the support on which the gudgeon rests and rotates. The definition of the witnesses makes the bearing consist of two parts, one movable and one immovable; the definition of the books makes it consist of either part—either the movable or immovable part; the patentee uses it for the immovable part. The holes in the cross-brace are to be the bearings for the trunnions of the treadle. The corresponding bearing in the defendant's machine is not in the treadle. In this particular the devices are different—the bearings are not in the same place. In plaintiff's device it happens that both bearings are in the cross-brace. In defendant's device, however, even if we consider the support as part of the bearings, as contended for by plaintiff, only one bearing is in the cross-brace. But in the definition of a bearing we observe that the support is not a part of it; a bearing being 'the portion of the support on which the gudgeon rests and rotates.' Again, the treadle of the patentee is provided with trunnions with knife edges; the treadle of the defendant is without trunnions and without knife edges. This makes another difference. It is familiar law that all the elements of a combination must be used to make infringement, no matter how immaterial any one may be. Is a treadle with a trunnion the same thing as a treadle without a trunnion? If not, the omission of the trunnion is the omission of the element. But, passing this, is a treadle with a trunnion with knife edges having bearings in holes in the cross-brace substantial to the plaintiff's purpose? It seems to me to be. It was urged as the value of the plaintiff's device by

> Mr. Munn in his letter of October 25th, *supra*, and the language of the claim cannot be escaped."

We say that this statement is most fair and conservative to Cramer because his Honor does not indeed take into account, as we have done here, those several minor statements and conditions which we have discussed and pointed out, which all point to the absolute rightfulness and accuracy of the conclusions and findings expressed in the above quotation.

We, therefore, respectfully and confidently contend that no construction can, or should be given by any court to this Cramer patent, other than as dictated by the proceedings in the Patent Office, and as asserted by Cramer himself as a condition precedent to the granting of the patent. Of course the patent so construed in the light of the file-wrapper and contents there can be no possible contention of infringement by the Singer Company, and the requested instructions to the jury to return a verdict for the defendant, should have been granted by reason of these facts and conditions alone.

Some authorities of this court upon the above conditions and propositions, and their particular application to the contentions at bar.

The two propositions so far discussed are:

1. That the Cramer patent rightly read and construed upon its face—the Singer Stand and Treadle does not infringe the first claim.

2. The Cramer patent rightly construed in the light of the file-wrapper and contents, the Singer Treadle and Stand does not infringe the first claim.

As we understand and read the decisions of this court,

it is now settled law that where a patent consists of and represents simply as to invention, an improvement, or patentable combination, the patentee is so required and expected to set forth in what such improvement and patentable combination consists, and to so distinguish it from the old art, that the improvement as an invention can be at once understood; and in what it consists in distinguishment from the old art; and this for the further good reason, (as to which decisions of this court have not been heretofore cited) so as to make it unnecessary for this, or any court, or the public to examine the old art and find out in what the improvement or patentable invention or combination consists—and that the patentee, as to an improvement or patentable combination, before he can expect to extend his patent or claim beyond substantially the form and statement of construction shown and described in his patent for such improvement, or combination—he must so indicate and express in his patent.

In the case of *James* v. *Cambell,* 104 U. S., 356, this court held in substance that where the claim of a patent was clear and explicit, as well as the specifications, the court would not go into the history of the art, and would abide by the claim.

In the case of *Mahn* v. *Harwood,* 112 U, S.. 360, this court said:

> "The taking out of a patent which has (as the law requires it to have) a specific claim, is notice to all the world, of the most public and solemn kind, that all those parts of the art, machine or manufacture set out and described in the specification, and not embraced in such specific claim, are not claimed by the patentee. . . .
>
> "Then, what is the situation? The public is notified and informed by the most solemn act on the part of the patentee, that his claim to invention is

for such and such an element or combination, and for nothing more."

In the case of *Fay* v. *Cordesman,* 109 U. S., 421, this court says, in speaking of the patentee as to his claim:

> "It is his province to make his own claim and his privilege to restrict it."

The case of *Keystone Bridge Co.* v. *Phoenix Iron Co.,* 95 U. S., 274, where the opinion of the court was given by the late Justice Bradley as to the province and scope of a claim, its metes, and bounds, is so apt an application to every feature of this case that we here quote therefrom in full.

> "When a claim is so explicit, the courts cannot alter or enlarge it. If the patentees have not claimed the whole of their invention, and the omission has been the result of inadvertence, they should have sought to correct the error by a surrender of their patent and an application for reissue. They cannot expect the courts to wade through the history of the art, and spell out what they might have claimed, but have not claimed. Since the Act of 1836, the Patent Laws require that an applicant for a patent shall not only, by a specification in writing, fully explain his invention, but that he 'shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery.' This provision was inserted in the law for the purpose of relieving the courts from the duty of ascertaining the exact invention of the patentee by inference and conjecture, derived from a laborious examination of previous inventions, and a comparison thereof with that claimed by him. This duty is not cast upon the Patent Office. There his claim is, or is supposed to be, examined, scrutinized, limited, and made to conform with what he is entitled to. If the Office refuses to allow him all that he asks, he has an appeal. But the courts have no right to enlarge a patent beyond the scope of its claim as al-

lowed by the Patent Office, or the appellate tribunal, to which contested applications are referred. When the terms of a claim in a patent are clear and distinct (as they always should be), the patentee, in a suit brought upon the patent, is bound by it. *Merrill* v. *Yeomans*, 94 U. S., 568. He can claim nothing beyond it. . . . (279.) As patents are procured ex parte, the public is not bound by them, but the patentees are. And the latter cannot show that their invention is broader than the terms of their claim; or, if broader, they must be held to have surrendered the surplus to the public."

In the case of *White* v. *Dunbar*, 119 U. S., 51, this court says:

"Some persons seem to suppose that a claim in a patent is like a nose of wax which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than, or something different from, what its words express. The context may, undoubtedly, be resorted to, and often is resorted to, for the purpose of better understanding the meaning of the claim; but not for the purpose of changing it, and making it different from what it is. The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public as well as an evasion of the law, to construe it in a manner different from the plain import of its terms. This has been so often expressed in the opinions of this court that it is unnecessary to pursue the subject matter further. See *Keystone Bridge Co.* v. *Phoenix Iron Co.*, 95 U. S., 274, 278; *James* v. *Campbell*, 104 U. S., 356, 370."

In the case of *Burns* v. *Meyer*, 100 U. S., 671, the late Mr. Justice Bradley, speaking as to the determination of the invention by the claim, as shown by its terms, says:

"It is well-known that the terms of the claim in letters patent are carefully scrutinized in the Patent Office. Over this part of the specification, the chief

> contest generally arises. It defines what the office, after full examination of previous inventions, and the state of the art, determines the applicant is entitled to."

In the case of *McClain* v. *Ortmayer,* 141 U. S., 424, this court, speaking through Mr. Justice Brown, says:

> "The object of the patent law in requiring the patentee to particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery,' is not only to secure to him all to which he is entitled, but to apprise the public of what is still open to them. The claim is the measure of his right to relief, and while the specification may be referred to to limit the claim, it can never be made available to expand it."

We respectfully suggest that this last remark applies with equal reason and accuracy to the statements appearing in the File-wrapper and Contents of a patent, namely: That while the File-wrapper and Contents may be referred to to limit the claim, they can never be made available to expand it.

In the case of *Railroad Company* v. *Mellon,* 104, U. S., 112, this court, speaking through the late Mr. Justice Blatchford, says:

> "The right of the plaintiff depends upon the claim of the patent according to its proper construction, and not upon what he may erroneously suppose it covers."

A decision of this court as to identity of principles and conditions involved, believed to be peculiarly applicable to this case.

It is at times of value and assistance to the courts at the circuit in arriving at right conclusions, to run a parallelism between a leading case in this court and the case un-

der discussion, where there is sufficient identity between the facts to justify such reference.

The case of *Snow* v. *Railway Co.*, 121 U. S., 629, appears to us to be peculiarly applicable and controlling to the facts and questions present now under discussion, and the construction given by this court in that case to a combination claim, in view of the statements in the specifications, is controlling in this case. Even admitting that there can be found or read into the Cramer patent some suggestion that the real invention does not reside, as Cramer says, "in the construction and combination of parts described and claimed;" but consists in the alliance of the treadle with the cross-brace, no matter in what manner the parts are constructed or combined, a quotation from the opinion of this court shows the fallacy of any such contemplated construction of the Cramer patent. The court below held that in construing the patent in the light of the specifications there could be no possible infringement, as follows:

> "Although the complainant's patent of June 11, 1872, suggests the principal and the most valuable parts of the combination found in the defendant's steam bell ringer, the plain and explicit language of the specification requires a construction of the first claim which will enable the defendant to escape liability as an infringer. The first claim must be limited to a combination in which the piston and piston-rod are detached from each other."

This court endorsed and adopted this language of the circuit Judge, and the reasons therefor, as follows:

> "On this appeal it is urged on behalf of the appellants, that this construction of their patent is too narrow; and it is now contended that the detachment of the piston and piston-rod is not an essential part of the description and claim of the invention pat-

ented. We cannot, however, but agree with the circuit Judge, that the language of the specification limits the first claim to a combination in which the piston and piston-rod are detached from each other. In describing his invention in the introductory part of the specification, the patentee manifestly divides it into two parts; the first relates 'to the construction of a steam bell-ringer in such a manner as to prevent any apparent leakage, either of water or steam, without resorting to the use of stuffing boxes;' the second, to cause the admission and release of the steam directly by the motion of the piston, and without the use of any intermediate parts between the piston and valves. . . .

"In the description of the device, with reference to the drawings, the specification says: 'The piston G is disconnected from its rod D, to prevent any lateral strain being communicated to it, thereby decreasing to some extent the wear of the piston in the cylinder.'

"*It is not admissible to adopt the argument made on behalf of the appellants, that this language is to be taken as a mere recommendation by the patentee of the manner in which he prefers to arrange these parts of his machine. There is nothing in the context to indicate that the patentee contemplated any alternative for the arrangement of the piston and piston-rod.*"

Applying the logic and finding of this decision to the construction contended for by Cramer as to the first claim, we find that the specification provides distinctly and unequivocally for certain constructions of the mechanism afterwards referred to in the claims, and having the following peculiarities and characteristics of construction:

1. The treadle is cast integral with two trunnions, one upon each side.

2. Said trunnions extend from the side of the treadle into loop-holes in the common cast-iron cross-brace.

3. Said trunnions are sharpened to an edge or corner

along their lower sides, and the lower end of the loop-hole is hollowed to an angle more obtuse than the edge of the trunnions, to serve as a bearing for the same and permit the rocking motion common to treadles.

4. The treadle and its trunnion bearings are wholly independent of the cross-bar, except its service of holding the brace to the legs.

5. The bearing holes in the brace are formed into long vertical loops to permit the entrance of the treadle.

6. The holes must be *through* the lower extremities of the vertical double cross-brace.

The patentee having previously stated that his "invention relates to improvements in the bearings of sewing machine treadles," etc., "and to this end my invention consists in the construction and combination of parts hereinafter fully described and claimed, reference being had to the accompanying drawings;" the patentee further saying: "By this construction my treadle bearings are rigidly fixed," etc.; the claim of the patent then being as follows: "The vertical double-brace joining the legs of the two ends of a sewing machine, provided with holes through its lower extremeties to serve as bearings in combination with a treadle provided with trunnions fitted to oscillate in such bearings. substantially as specified."

To paraphrase the language of this court in this last case and here apply it for example "there is nothing in the context to indicate that the patentee contemplated any alternative" for this arangement, and it would seem to be certain that a treadle *without trunnions* is not a treadle with *trunnions cast thereon as distinctly* provided for in the Cramer patent. It would seem to be certain that a vertical, double brace or any other kind of a brace joining

the two ends of a sewing machine having no holes whatever, of any description, to serve as bearings, is not the alternative, under these specifications, of a vertical double brace having holes through their lower ends to serve as bearings. It would seem to be certain, also, that a vertical double brace with no vertical loops in its lower end to permit the entrance and exit of the treadle, in combination with a treadle provided with trunnions fitted to oscillate in such loop, or bearings, is not an alternative for a vertical brace that has neither holes nor loops of any description in its lower extremeties to serve as bearings, and has no capacity for oscillation of any description in such bearings.

It would seem to be certain that a treadle hung in the old cross-bar of a sewing machine is not the alternative of a treadle hung in the old cross-brace.

It is true that there can be found in the specification the statement of the patentee that he is "aware that sewing machine treadles have before been provided with V-shaped bearings, and I do not claim the same as my invention." The presence of this disclaimer is accounted for by the action of the Patent Office, and the disclaimer is no broader than the precise language used; and it means nothing more nor less than that Cramer was not the inventor of V-shaped bearings *per se*, but, as shown by this specification and the file-wrapper and contents, this statement means nothing else except that although Cramer finally disclaimed that he was the inventor, *per se*, of V-shaped bearings, he still contended he had made an invention by organizing the structure shown in his patent, and that he was the first to use V-shaped bearings on trunnions cast integral with a treadle; that he was the first to extend said trunnions into peculiar loop-holes having

the peculiar characteristic and quality of being hollowed to an angle more obtuse than the edge of the trunnion, and to serve as a bearing for such V-shaped trunnion, and permit the rocking motion of the treadle and to permit the treadle to be put in and taken out at will; and that he was the first to so surround and cushion said trunnion bearings in their loop-hole action as to prevent said trunnions from bouncing and thumping endwise when the trunnions were in motion.

The single fact that Cramer disclaimed in his patent "sewing machine treadles provided with V-shaped bearings" and did not disclaim as to any other part of his described mechanism, proves conclusively that his asserted invention consisted, as he says in his patent, in the "construction and combination of parts described and claimed."

Again, although the hanging of the treadle in the lower depending ends of a cross-brace would be of equal value and efficiency if applied to all other kinds of machinery driven by a treadle, as so stated in Cramer's first rejected application, there is not a line of testimony in this case that shows that such hanging was of any utility by reason of the fact that such hanging had been adopted and used in any other style or class of machinery besides a sewing machine, it always being open to every industry, so far as the Cramer patent is concerned, to so hang their treadle; as the Cramer patent, as to specification and claim, is confined solely to a sewing machine, and disclaimed by the file-wrapper and contents as to all other kinds of machinery.

We respectfully submit that the rule of law and construction as laid down in this last case, *supra*, should govern the construction of the Cramer patent and claim

in this case; and so governing, the Singer Company's Brace and Stand does not, and cannot, infringe Cramer's first claim.

The antecedent art bars any amplified construction being given to Cramer's patent, even if his specification and claim so permitted. The old art as to sewing machine stands and treadle bearings, both as disclosed by the records of the Patent Office, and as proven to exist in and among the leading sewing machine manufacturers of the United States, proves unquestionably and conclusively two conditions: (1) That the Cramer "invention consisting in the construction and combination of parts fully described and claimed," is of doubtful capability of employment commercially. (2) That simply the hanging of a sewing machine treadle in the lower depending ends of a vertical cross-brace of a sewing machine, per se, is without added value or utility, in that industry.

We are of course aware that in the case of a valuable and basic invention, that has worked a revolution in the industry to which it relates, and is manifestly of great value and utility in such cases where there is nothing of limitation on the face of the patent, nor in the file-wrapper and contents, nor in the old art, and nothing of negation as to the value and standing of such invention—that the court will give a far more wide and liberal construction to the patent than if such conditions did not exist. For this reason, irrespective of the constricted terms of the patent, and the claims, and the proceedings in the Patent Office, we desire that this court shall know that there is nothing in even any idealization of this Cramer pat-

ent, as insisted upon by his counsel, that shall justify any other construction of the patent than plainly necessitated by the terms of the patent itself.

As to the first position, above asserted, the reason of the doubtful capability of employment commercially in the sewing machine industry of the Cramer devices, such fact is plainly apparent simply from an inspection and study of the patent. It is perfectly evident that the sharpened edges of the trunnions riding in the loop, as shown in Figure 2, when the treadle is dropped into position in the long vertical loops, would simply, in action, play backwards and forwards like the shuttle of a weaver's loom "and bound and thump endwise when the treadle is in motion," as expressed in Cramer's patent. The outer ends of the sharpened trunnions would strike against the iron of the legs of the machine, and such a construction would, clearly as a commercial proposition, ruin the sale of the machine.

Again, it is entirely apparent both from an inspection of the mechanism of the Cramer patent, and from the specifications thereof, that to make a machine practicable, the treadle bearings must be secured and controlled after being dropped into the long vertical loop, by the accompanying devices therein described; namely, the block serving as a backer upon which the cushion is fastened and fitted into the loop-holes, for confining and regulating the movements of the treadle. The specification provides that this block has projections or tangs fitted into the recesses of the brace, and held in place between the brace and the leg of the sewing machine stand. It is perfectly apparent from this construction that the blocks, cushion, and confining devices for Cramer's treadle must be placed in position before the brace is allied with the stand, for

manifestly it is impossible to place the block and cushion in position after the brace has been so allied.

It follows from this fact also, that after the block and cushion have been put in position for confining the treadle in Cramer's construction, that the treadle cannot be removed from the frame of the sewing machine without taking the frame apart, and it needs no testimony to establish the fact that the alliance of any kind of a treadle with a sewing machine in such manner that the machine would have to be dismantled, and the frame taken apart before it could be removed, would be commercially without capability of employment by any sewing machine manufacturer, and would mean simply the extinguishment of the value of the machine as a standard machine, if placed therein.

There is no testimony in this case from any user of the device of the Cramer patent, purchasing the same of Cramer, that it has any value. There is no testimony in this case to any value of this Cramer device by any party who ever manufactured it. The only testimony in this record as to the making at any time of any device under this Cramer patent, is by Cramer himself, his son, and daughter, young children at that time. Cramer himself testified: That the devices of his patent can be put into any sewing machine, and is an attachment to a sewing machine.

There never has been a sewing machine made in this country from the beginning, which had a vertical cross-brace and treadle, which cross-brace could not have been taken out and the cross-brace and treadle of Cramer substituted therefor. There never has been a sewing machine manufactured in this country from the beginning, without a cross-brace in which the cross-brace and treadle

could not have been inserted and used. Cramer so testifies.

Cramer also testifies that he made his first brace and treadle like his patent, and put in the first cross-brace and treadle of his patent in the year 1881; that he was a dealer in new and secondhand sewing machines, and put his patented cross-brace and treadle in machines which he bought and sold; that he never had but two sets of castings made of his patented brace and treadle to be put by him into sewing machines, and these did not exceed 25 to 40 in number; that these castings were made the first lot five or six in number, at Sonora, California in the year 1881 (Rec., p. 41); the second set of castings were made at San Francisco in the year 1883 (Rec., p. 42); that he put the last of these thirty-five or forty castings of his patented brace and treadle into sewing machines in the year 1885 (Rec., p. 44); that he had ample means and capital and backing to make these devices during that time. (Rec., p. 58.)

Cramer himself testified that after the grant of his patent, he wrote to, and attempted to induce, every one of the principal sewing machine manufacturers in the United States to adopt and use the invention of his patent sending them an identification and a copy of his patent (Rec., p. 87), and that no manufacturer so written adopted it. The testimony shows that none of the leading sewing machine manufacturers in the United States adopted the devices of this Cramer patent during its lifetime. Cramer so testified. And the petition for certiorari shows that no sewing machine manufactuer of the United States has adopted or followed the devices of the Cramer patent, or even hung their sewing machine treadles in a cross-brace in any way or manner in a sewing machine since the expiration of the Cramer patent. (Petition for Certiorari Writ, p. 18.)

We respectfully submit that there can be no more persuasive or convincing testimony as to the total commercial worthlessness of the devices of the Cramer patent consisting in "the construction and combination of parts fully described and claimed" by him, than the facts which appear from Cramer's own testimony. Everything outside of these statements of facts appearing in the Cramer deposition is clearly conclusions and unwarranted statements upon his part, and contradicted by all the facts themselves.

The testimony and the old art show that Cramer was the first and last inventor or manufacturer of the peculiar mechanical abnormal structure shown in his patent. The testimony and the old art show, however, that every advantage claimed for the idealized construction of the Cramer patent by his counsel is present time and again in the old art, and in sewing machines, and for thirty years has been there present and not departed from.

Engish patent to Bourdin, dated June 27, 1874, No. 2,232, for an improvement in sewing machines (Rec., p. 202-3-4-5) plainly exhibits in the drawings and in the specifications a treadle hung on a cross-bar, mounted in the lower depending ends of a cross-brace of a sewing machine; the drawing clearly illustrating this fact appears opposite Record, page 205. The inventor in that case does not seem to think that such mounting and construction is anything unusual; or any particular description thereof necessary other than represented by the drawings. In this Bourdin patent the treadles are spaced and held apart by collars on the cross-bar or tie-rod; but they represent not so wide a departure from the Cramer patent as the Diehl structure, or Singer device.

The remainder of the patents present as exhibits in

this record represent substantially well-known methods and means of mounting the treadle upon a cross-bar, or tie, used by the principal sewing machine manufacturers of the United States for thirty years past, and more particularly referred to and described hereafter, and not, therefore, at this time enlarged upon, for the reason that the practical testimony of the existence and use of the device standing for the old art, is of more weight than the patents describing the same.

We will now turn to the other clause of discussion under the last heading as bearing upon any possible construction that can be given to the Cramer patent, namely, (2) *that simply the hanging of a sewing machine treadle in the lower depended ends of a vertical cross-brace of a sewing machine, per se, is without added value or utility in that industry.*

We have in the preceding part of this brief attempted to show your Honor that in the device of the Diehl patent, used by the Singer Company, and constituting the asserted infringement in this case—that in that device the hanging of the treadle in the cross-bar, as is provided for in the Diehl patent is a mere accident or incident of construction so far as such hanging is concerned; and that the treadle is only there so hung as to procure a desired and necessary relation between the band-wheel and the treadle for the purposes described in the Diehl patent. The Diehl patent states the invention of this construction as follows:

> "The essential part of my invention being the providing of supports for both the band wheel and the treadle, which are integral with the brace, so that when said band wheel with its driving crank and said treadle, have been hung within said brace and connected by a suitable pitman, *their adjustment*

to and relationship with each other are practically permanently secured."

What earthly relationship does this invention and construction bear to the Cramer devices described and claimed?

On the trial of this case the inventor Cramer himself, and his counsel, simply cut loose from the patent and first claim, as to all qualifications and restrictions, and tried the case before the jury, and was permitted to so try the case by the court, upon the theory that Cramer's invention was, as a matter of fact, the hanging of the treadle in any way, in or upon or in connection with a vertical double brace, by any means. This position is represented by the multitudinous statements of Cramer and his counsel by such expressions as: "That is my invention—hanging the treadle in a vertical double brace" (Rec., p. 69); and "I sue them for hanging the treadle in a vertical brace" (Rec., p. 103); and *"My patent is simply for the method of hanging the treadle in the lower end of a vertical double brace"* (Rec., p. 74), Cramer continually asserting that the great advantage of this construction was keeping both bearings of the treadle in alignment. (Rec., p. 40.)

The testimony in this case shows that all of the principal sewing machines of the leading manufacturers in the United States have been handled and sold by large agencies on the Coast, principally at San Francisco, for the last thirty years. Cramer himself, as a second-hand dealer, says he "sold most every kind of machine in the market" (Rec., p. 84), and mentioned by name the leading sewing machines upon the market at that time, such as the Domestic, Wheeler & Wilson, Howe, Davis, White, Wilcox & Gibbs, etc. (Rec., p. 84.)

It is scarcely open to dispute that the manufacturers

of these sewing machines, and their managers and agents, knew perfectly well, as a question of fact, whether there was any advantage in hanging the treadle in any way in the lower depending ends of the cross-brace, and whether or not a perfect and absolute alignment between the two bearings of the treadle was present in their machine, and whether or not such alignment was continued and assured in the practical operation of a machine.

So that there can be no possible dispute as to this matter, and to ascertain whether or not Cramer had really accomplished anything of utility as to the treadle-bearing devices of a sewing machine upon the theory his counsel now asserts, the Singer Company called all of the managers and agents of the leading sewing machine concerns as above indicated, having charge for the last twenty or thirty years of the sewing machines of their respective companies upon the Pacific Coast, and took the testimony of these parties as to questions of fact in distinction from theories. The testimony of all these witnesses was that there never was any trouble whatever, and never had been during the last thirty years, in the bearings of their treadles getting out of alignment, and no embarrassment or inconvenience whatever in the use of collars and set-screws in assuring such alignment, and that for thirty years past neither did, nor does now, any of these leading machines get out of alignment, nor do they get out of order, or make noise, etc.

A. T. Eggleston, manager of the Wilcox & Gibbs Sewing Machine Company at San Francisco, and familiar with that machine and selling it for twenty-eight years (Rec., p. 293), testified that the Wilcox & Gibbs machine for thirty years past never has had any vertical cross-brace connecting the two ends of the machine; that such brace was not necessary; and introduced exhibit

called "Defendant's Exhibit 13" as one of the original sewing machines used for thirty years, and sold generally throughout the United States. (Rec., p. 293.) Eggleston then testified that during that thirty years the treadle of the Wilcox & Gibbs machine had rested in recesses in the legs of the machine upon knife edges. (Rec., p. 293.) He was then asked:

> "Q. Have you ever known bearings of the Wilcox & Gibbs stand to get out of alignment with each other?
>
> "A. No, sir.
>
> "Q. Is it possible for them to get out of alignment with each other say while the machine is going?
>
> "A. I don't see how it is if the treadle rod is in, unles the treadle rod is bent. If the treadle rod is straight, I don't think it would be possible."

Mr. Eggleston then testified that the Wilcox & Gibbs machine brought a higher price than any other sewing machine sold in the market, and has been sold constantly in competition with all machines for thirty years. (Rec., p. 294.) Upon cross-examination Cramer's counsel attempted to show that the treadle in the Wilcox & Gibbs machine could be got out of alignment by the nuts on the ends of tie-bar holding the legs of the machine together becoming loose and permitting the legs to spread, and that you would have to tighten up the nut to prevent this. Of course exactly the same result would follow in the Cramer machine, and as to the Cramer treadle, if the nuts on the ends of the tie-bar holding it in place should work loose, the legs would spread, and the fastening blocks of the Cramer patent be kicked out by the treadle trunnions.

John W. Evans has been a dealer, representing the Domestic sewing machine upwards of thirty years; he

described during that time the manner in which the treadle of a Domestic sewing machine was hung, as follows:

> "The treadle is on V bearings resting on the treadle rod. There is a knife edge under the treadle, and a V-shaped groove in the rod in which the treadle oscillates, or with the collars on each side to keep it from moving sideways." (Rec., p. 285.) "The rod upon which the treadle rides in V-shaped groove is a tie-rod." (Rec., p. 285.)
>
> "Q. Is it possible as that is constructed, for the bearings of the treadle to get out of alignment with each other?
>
> "A. No, sir."

The witness also testified that there was never any trouble about noise in such treadle construction unless the collars slipped to one side, and that there never was any tendency for such slipping. (Rec., p. 285.) The witness also testified that prior to 1883 the conical-shaped collar fitted into a tapering hole in the treadle. Witness also testified that he had known the patentee Cramer since 1882; that Cramer then showed him his device and wanted him to get the Domestic Sewing Machine Company to adopt it, and that he talked with the officials of the company about it at New York in the year 1882, and that they would not consider it at that time. (Rec., p. 286.) The Domestic stand, with treadle, was introduced in connection with Evans' deposition, identified by him, and marked "Defendant's Exhibit 9." Cramer's counsel, upon cross-examination, attempted to prove by the witness that the set-screws would wear loose sometimes in running the machine, as follows:

> "X-Q. Those set screws wear loose sometimes in running the machine, do they not?
>
> "A. *I have not known them to in running the machine. No.*

"X-Q. I mean to say after the machine has been in operation a certain length of time, the set-screws become loose from their constant use, do they not?

"A. *There is no tendency there to loosen the set-screws, Mr. Miller.*" (Rec., p. 288.)

Wm. E. Jackson testified that he had been in the sewing-machine business for thirty years, dealing in the Davis machine, that had been upon the market for thirty years. (Rec., p. 297.) The witness introduced a machine marked "Defendant's Exhibit 15." That represents the style of treadle and machine used by the Davis Company for over thirty years. (Rec., p. 298.) He testified that the "treadle was hung on a tie-rod, with a cone on each side of it," and that it was "hung in conical bearings."

"Q. State whether or not you have any trouble with the bearings of the treadle, as shown in Exhibit No. 15, getting out of alignment with each other.

"A. I don't see how they can.

"Q. Have you ever known an instance in any case where the bearings of this Davis treadle, as shown in Exhibit No. 15, have got out of alignment with each other?

"A. No, sir; I have not."

C. A. Hawkins, general agent of the White Sewing Machine Company, San Francisco (Rec., p. 266), had handled and sold the White machine with the treadle hung in cones on the tie-rod, for about twenty years; about 1,100,000 of such machines sold. He testified that the White machine had been sold in competition with the Singer machine side by side since 1876. (Rec., p. 267.) He testified that he never had heard of such a thing as the treadle bearings getting out of line with each other on the tie-rod; that he had dealt largely in

second-hand machines, and certainly would have known of any such trouble had it existed. (Rec., p. 268.) He also testified that he could not see any advantage whatever in hanging the treadle in a cross-brace. (Rec., p. 267.)

Frederick S. Prescott, manager of the Wheeler & Wilson Sewing Machine Company in California, and in the sewing-machine business for thirty-six years; testified that the treadle is hung on rods with cones on each side (Rec., p. 275); and as to the matter of the treadle hung upon a tie-rod having its bearings in cones getting out of alignment the witness said:

> "It is not possible to get the treadle bearings out of alignment. I have never known any of these treadle bearings to get out of alignment. *I have never heard of any such thing as a treadle getting out of alignment in any machine.*"

After the witness had testified that the Wheeler & Wilson sewing machine stand had a vertical brace, he was then asked (Rec., p. 275):

> "Q. *Do you know of any advantage that there would be in hanging the tie rod on the bottom in the double brace instead of putting it in the web of the legs?*
>
> "A. *I don't see any advantage.*"

From the above facts, admitted, self-evident, and proven, three conditions are apparent:

1. That Cramer's invention, consisting in the *"construction and combination of parts fully described and claimed"* in his patent, is of more than doubtful capability of employment commercially, and represents and stands for simply an abnormal conception and arrangement of mechanical parts, and that simply the hanging of a sewing-machine treadle in the lower depending ends

of a vertical cross-brace of a sewing machine in itself is without added value or utility whatever.

2. That none of the leading sewing machine manufacturers selling their machines on the Pacific Coast, or indeed elsewhere, have ever, as a matter of fact, hung any of their sewing machines treadles in the lower depending ends of a vertical cross-brace.

3. Lastly, that of the millions upon millions of machines sold by these old standard sewing machine manufacturers upon the Pacific Coast, and elsewhere, in the last thirty years, there has never been the slightest trouble or complaint as to the treadle bearings getting out of alignment, when the treadle is mounted upon a cross-bar, or in the legs of any sewing machine; and that there never has been commercially and practically the slightest embarrassment or cause of complaint of noise, or otherwise, from the loosening of cones on the cross-bar carrying the treadle bearings of any sewing machine.

These facts being as they are, what possible ground of contention, equitably or otherwise, can there be that Cramer's patent is entitled to any broader construction than that which he himself has asserted his invention to consist in, namely, "the construction and combination of parts fully described and claimed."

The decisions of this court, cited by the Circuit Court of Appeals for the Ninth Circuit, and some pertinent decisions of this court bearing upon the rightful construction of this Cramer patent.

There is no more curious and seemingly grotesque condition connected with this whole litigation than that which is apparently represented by the decision of the Court of Appeals, and in the light of which they found

it necessary to justify the finding of the jury verdict in this case. The Court of Appeals say as follows (Rec., p. 459):

> "If the evidence was true that Cramer was the first to present a new and useful combination by mounting his treadle in the vertical cross-brace, thereby obtaining the advantages which some of the witnesses testified to, he was undoubtedly entitled to the protection of that combination, and *to the exclusive right to mount a treadle in the cross-brace, no matter what the form of the treadles might be.* This view is fully sustained by the general doctrine of the decisions: *Winans* v. *Denmead*, 15 *How.*, 330; *Ives* v. *Hamilton*, 92 U. S., 426; *Machine Co.* v. *Murphy*, 97 U. S., 120; *Hoyt* v. *Horne*, 145 U. S., 308."

An examination of the four cases in this court above cited seems to be without semblance of justification for the statement and finding of the Court of Appeals in this case, and if the rightfulness of such finding depends upon these cases, the error of conclusion is manifest. In no one of the above cases is it stated or intimated that because the patentee, or his assignor, was entitled to the protection of the combination identified by the relied upon claims disclosed by each of these cases, and where such combined claims were held to be valid, that each of said patentees was entitled to the exclusive right no matter what the forms of mechanical combinations might be. In each of the four cases above, this court found, and found only, that the devices and combinations proceeded against as an infringement of the specified claims, were either substantial reproductions, or plain mechanical equivalents of the parts constituting the combination of the respective claims. As, for example, in the case of *Machine Company* v. *Murphy*, 97 U. S., 122, the claim at issue was as follows:

> "Making a cutter which cuts the paper from the roll in such form that in cutting off the paper it cuts it in the required form to fold into a bag without further cutting out."

It appears by the decision that the patentee was the first person to organize an operative machine to make paper bags in this manner (p. 123); and it appeared that the entire machine would be without value except as to the devices of this claim (p. 126). The claim did not confine the invention to the devices exhibited by the patent; and this court found that the devices used by the defendant were clearly mechanical equivalents of the devices disclosed by the patent for carrying out the invention of this claim.

The citation of the case of *Winans* v. *Denmead* is indeed unfortunate as a reference to any question in this case. As to the subject matter involved in that case, this court says:

> "This patent was not for merely changing the form of a machine, but by means of such change to introduce and employ other mechanical principles or natural powers, or a new mode of operation, and thus attain a new and useful result."

In that case the words *"conical"* and *"cylindrical"* were used in describing the car body. The defendant's car body was constructed *octagonal* and *pyramidal*. The court held that the patentee did not contemplate a true circle; that a circle was made up of short lines, and found infringement, reversing the court below. It is a matter of interest even as to this case to note that the decision at the Circuit Court was reversed by this finding, and that Mr. Chief Justice Taney, together with three other of the justices, dissented from the above finding.

Again, the case of *Ives* v. *Hamilton*, 92 U. S., 429,

related to a patent having for its object mechanical means to produce a rocking motion of a saw in operation (p. 431), the old method of operating this kind of a saw being a direct up-and-down movement. The defendant sought to evade the charge of infringement by substituting guides that had the same effect as the curved guides of the patent and claim to carry out the invention, but not having the precise curved line of the patent. This court found infringement in that case, and that the two guides were mechanically equivalent, simply upon inspection, this court saying:

> "The substitution of guides at the top made crooked by a broken line instead of a curved line, is too apparent an imitation to need a moment's consideration."

Manifestly no such question is here present.

The case of *Hoyt* v. *Horne*, 145 U. S., 308, seems to to be a case where the patent related to a marked advance in the art in reduction of rags to pulp, the change being so marked, as represented by the patent, that—

> "The result of this (his invention) is such a greatly increased speed in the flow of the pulp that it is said to be brought in contact with the knives twelve times as often as was possible in the old tub or engine."

The defendant in that case had been a manufacturer of the patentee's machines; had had a disagreement with him, and had engaged in the manufacture of the machines of the patentee with only a slight change. As to this matter the court says:

> "The substitution of a vertical for a horizontal mid-feather at the inoperative end of the tub is merely the use of an old and well known mechanical equivalent, and obviously intended to evade the wording of the claims of the Hoyt patent." (P. 309.)

We respectfully submit that no case can be found in this court, nor do we believe any case at the Circuit, where invention is asserted by a patentee to consist in "the construction and combination of parts fully described and claimed," reference being had and made in the patent to the drawings to determine such particular construction and combination, and where such patent relates at most to a detailed improvement in an old mechanism as shown in the Cramer patent—that such patent has been treated as basic, or such patentee a pioneer in the art to which his patent relates.

It would seem that this court has never found patents to be basic, and the inventors thereof pioneers, unless in the first instance such patents and inventions had, as a matter of fact, made their record in that industry, and admittedly and provenly denoted the progress of science and the useful arts. In no single instance can it be found that any of the thousand and one inventions standing as improvements in old machines have ever been designated in any court as basic, or the inventors as pioneers. The conditions necessary to entitle a patentee to be called a pioneer, or his invention broad and basic, have been clearly defined, as we take it, by this court.

In the case of *McCormick* v. *Talcott,* 20 How., 405, this court says:

> "If the patentee be the original inventor of the device or machine called the divider, he will have a right to treat as infringers all who make dividers operating on the same principle, and performing the same functions by analogous means, or equivalent combinations, even though the infringing machine may be an improvement of the original, and patentable as such."

In the case of *Railway Co.* v. *Sayles*, 97 U. S., 554, this court, speaking upon this precise point, said:

> "In such cases, if one inventor precedes all the rest and strikes out something which includes and underlies all that they produce, he acquires a monopoly, and subjects them to tribute. But if the advance towards the thing desired is gradual, and proceeds step by step, so that no one can claim the complete whole, then each is entitled only to the specific form of device which he produces, and every other inventor is entitled to his own specific form, so long as it differs from those of his competitors, and does not include theirs."

In the case of *Morley Mach. Co.* v. *Lancaster*, 129 U. S., 273, the court says:

> "Where an invention is one of a primary character, and the mechanical functions performed by the machine are as a whole, entirely new, all subsequent machines which employ substantially the same means to accomplish the same result, are infringements, although the subsequent machine may contain improvements in the separate mechanisms which go to make up the machine.
>
> "Morley, having been the first person who succeeded in producing an automatic machine for sewing buttons of the kind in question upon fabrics, is entitled to a liberal construction of the claims of his patent. He was not a mere improver upon a prior machine which was capable of accomplishing the same general result; in which case, his claims would properly receive a narrower interpretation."

These are the three cases cited by the text-writers, as, for instance, Walker on Patents, Section 359 to 362, as fixing the right rule or guide, in determining whether or not a patent is a basic patent, or the inventor a pioneer; and these three cases have been so recognized as the authorities upon this proposition by the bar.

The Court of Appeals of the Ninth Circuit did not see

fit to cite either of these cases, nor could they justly, as applicable to this case; but did see fit to cite four cases of this court which, we take it, do not in any way stand as a justification of, or authority for, the actual finding made by that court. A decision of this court, since the three last cited, most tersely restates and epitomizes the rule of these decisions:

In *Miller* v. *Eagle Mfg. Co.*, 151 U. S., 207, where the court says as follows:

> "The range of equivalents depends upon the extent and nature of the invention. If the invention is broad or primary in its character, the range of equivalents will be correspondingly broad, under the liberal construction which the courts give to such inventions. The doctrine is well stated in *Morley Machine Co.* v. *Lancaster*, 129 U. S., 273, where it is said, 'Where an invention is one of a primary character, and the mechanical functions performed by the machine are, as a whole, entirely new, all subsequent machines which employ substantially the same means to accomplish the same result are infringements, although the subsequent machine may contain improvements in the separate mechanisms which go to make up the machine.'"

If we are right in our understanding and view of the authorities and decisions of this court, the opinion of the Court of Appeals of the Ninth Circuit is erroneous, and the result, conclusion and order of that court is as wrong as the opinion expressed.

The question of infringement of Cramer's first claim discussed specifically. Whatever construction may be put upon the Cramer patent there is absent from the Singer stand and brace, two of the elements identified by the Cramer patent and first

claim without any substitution of any mechanical equivalent therefor.

At the risk of repetition, we again present this question in detail under a different phase of discussion.

There cannot be any contest upon the proposition that two of the essential and controlling elements of the Cramer patent, and which are carried into and made a part of the claim itself, are: (1) the vertical double brace provided with holes, etc.; and (2) the trunnions.

The Singer or Diehl stand and brace absolutely and unqualifiedly is without either of these elements so far as its treadle relations are concerned; and as absolutely and unqualifiedly there is no mechanical equivalent or substitution therefor. These parts are simply and baldly omitted. The double vertical brace represented in his patent was old.

Cramer in his patent says that "'C' represents the usual cast iron double brace connecting the two ends diagonally in a plane generally vertical." He also designates the old common cross-bar and tie-rod at the base of every sewing machine as *"the common cross bar 'D.'"* He also says that "the treadle and its trunnion bearings are wholly independent of the cross bar 'D.'" It is entirely evident, then, that his invention has no relation whatever to the cross-bar, and is entirely independent thereof. It would appear to be quite certain, then, that if the treadle of the Singer or Diehl stand and brace is mounted in the cross-bar in distinction from the vertical cross-brace, it is a different and distinct thing from the device of the Cramer patent. It is entirely evident from an examination of the Diehl or Singer stand and brace that so far as the operative part of the treadle is concerned, the brace can be cut off at its point of junction

with the cross-bar, and removed entirely from the machine; and if the band or driving wheel of the Singer device was located upon the legs of the sewing machine as shown in the Cramer patent, the operativeness of the machine would not in any way be interefered with.

It would seem that nothing could be more certain than that if the vertical double brace of the Cramer machine were removed entirely and the treadle mounted as shown in the Diehl patent upon offsets in the cross-bar, or upon bosses or projections cast integral with the cross-bar, and extending upwards therefrom with screw threaded openings as shown in the Diehl patent, that such a device would bear no relation to the Cramer invention.

The contention of Cramer's counsel in now idealizing Cramer's supposed invention is, that Cramer's "invention" consists in taking the treadle out of and away from the old common cross-bar in and upon which it had commonly been hung, and then hanging the treadle in the old vertical double cross-brace. If Cramer's invention even thus wildly idealized was that he had found out that he could hang the treadle in the old double vertical brace instead of in and upon the old common cross-bar, there certainly can be no question of mechanical equivalency by still hanging the treadle on the old cross-bar in which it had from time immemorial been hung in a sewing machine.

Again, if Cramer's invention, as he says in his patent, "consists in the construction and combination of the parts fully described and claimed," and if he now says that such construction and combination of parts is his invention, even if applied in some manner to the old cross-bar, then there is absolutely no identity in the construction and combination of parts between the Cramer com-

bination and construction as shown in his patent and the cross-bar and treadle of the Singer or Diehl machine.

It is true that Diehl in his patent speaks of his unit and composite structure of cross-bar and vertical double brace as a "cross-brace," but this does not alter the fact that the old, usual vertical double cross-brace and the old, usual common cross-bar are simply cast together as one piece; that the treadle of Diehl's patent is mounted in this cross-bar is not only so described in the patent and shown in the drawings, but it is made the subject specially of the fifth claim, as follows:

> "Fifth. A cross brace for sewing machine stand having at its base a cross bar, combined with a treadle mounted in said cross bar, substantially as set forth."

It is true also that the Diehl patent provides that the cross-bar may be omitted, and the treadle hung directly on downward projections from the brace; but this construction is not present as an asserted infringement, and has no significance in the Diehl patent except in showing how the alignment of the band-wheel and treadle can be retained even if the cross-bar element of the brace should be partly omitted. The converse of the statement would be equally true, that the entire vertical cross-brace could be omitted and the band-wheel hung on the legs of the machine, as shown in the Cramer patent.

Again, let us take for another illustration as to this fact the treadle mountings used for thirty years, and present in court in machine form of the Domestic Sewing Machine Company, and described in full upon Record page 285, in the deposition of Mr. Evans. In this machine the treadle is mounted upon a cross-bar or tie-rod, and rides in a V-shaped groove in the cross-bar or tie-rod upon a knife edge, the knife edge being under

the treadle, and the V-shaped groove on the cross-bar or tie-rod itself. The treadle is held in place and to its bearings by a collar on each side that keeps it from moving sidewise, and does not permit it to "bounce or thump," as stated by Cramer. In the Cramer device there is a cushion block with upward and downward projections, at the end of the treadle bearings, which keep them in place when the legs of the sewing machine are put together; but in the Domestic sewing machine the treadle is mounted on a tie-rod or bar in a V-shaped groove upon it, with collars instead of cushion blocks to hold the treadle bearings in position and down to their work; and if, as now contended by Cramer, the taking of the treadle from the cross-bar or tie-rod and putting it in the vertical double cross-brace in the manner shown, was his invention; manifestly the mounting of the Singer treadle in the old cross-bar in any way could not be such invention in any respect.

TRUNNIONS.—The second element of Cramer's patent, and first claim made absolutely essential by the drawings, specifications and the claim itself, is the trunnions with which the treadle is provided, and which in the specifications it is provided that such trunnions are cast as a portion of the treadle. The outer end of these trunnions are fitted to and oscillate in such bearings. Even the word "fitted" as used in the first claim in connection with these trunnions is restrictive as well as descriptive, and must refer to the lower end of the "loop hole that is hollowed to an angle more obtuse than the edge of the trunnion, to serve as a bearing for the same, and permit the rocking motion common to treadles." It is this precise fitting that is referred to as a part of the claim.

Aside, however, from the relation of this fact to the claim, there is absolutely absent and wanting in the Singer or Diehl device trunnions of any kind, name, nature, or description; or any construction that can by any stretch of the imagination be considered or designated a mechanical equivalent therefor.

In the Singer or Diehl device, at the point upon the treadle at which appear the trunnions of Cramer, there is not only absent any trunnion or any other projection, but there is a small conical recess in the treadle itself. The treadle of the Singer device hangs and moves upon the points of two point-center screws or bolts, such bolts having conical shaped points that fit in to the conical shaped recesses in the sides of the Diehl treadle. There is nothing of any description that is interposed between the outside edges of the Diehl treadle and its small conical recesses and the off-set in the Diehl cross-bar on which the treadle is hung. There is not only no trunnion of any description cast with the Diehl treadle, or associated in any way with the Diehl treadle, but there is no room or place for any such trunnion. The point-center screws of the Diehl device are no part or portion of the treadle. In Cramer's device his trunnions must move with the treadle, and the treadle cannot move without the trunnions, nor the trunnions without the treadle; they of necessity oscillate with the treadle upon their knife edges, fitted as above indicated. The point-center screws that hold the Diehl treadle in place, and upon which it moves, are as fixed and rigid as if they were a part of the cross-bar. The Diehl treadle moves only upon its conical points. The bearings as to resulting effect and structure between the Cramer device and the Singer or Diehl are the direct antitheses of each other. In the Cramer bearing the V-shaped trunnions oscillate

and move in an arc of a circle and adjust themselves automatically by the wear of the separate parts, without any capability of adjustment sidewise. The point-center screws of the Diehl device do not oscillate; the bearing is oblique and endwise, and the wearing of the parts must be taken up, not automatically, but by the advancement of one or both of the screws; and the mere fact that both bearings, like the bearings of all sewing machines, must carry the treadle goes for nothing as to the matter of mechanical equivalence, for it is not sufficient that both bearings must do the work generally that is done in every sewing machine and necessary for the operation of the treadle, but they must do the same work in the same way.

The Cramer patent makes a clear distinction between the trunnion itself cast as a portion of the treadle, and the trunnion bearings. Cramer's patent distinctly states that his trunnions extend from the side of his treadle into the loophole in the common cast-iron brace "C." The trunnions are marked "B," and are plainly shown so extended between the treadle "A" and the brace "C" in the drawings. To make this difference between the trunnion itself interposed between the treadle and the brace and that portion of the trunnion to act as a bearing, Cramer says *"below the bearings of the trunnions* B" he attaches an oil-cup to catch the drip.

Trunnion. What is a trunnion, and has the term any significance or meaning otherwise than its commonly accepted meaning, and as used in the Cramer patent?

There is no question that the trunnion, whatever it is, is an element of Cramer's first claim. His patent from beginning to end identifies exactly and precisely what he

means by the "trunnion" of his claim. It is identified in the drawings by letter "B," and in no part of the patent is it suggested that these trunnions can be altered or changed in the least; and the patentee makes the further distinction between that portion of the trunnion cast with the treadle, and that portion of the trunnion which oscillates as a bearing in the loophole in the lower end of the brace. Wherever Cramer refers to this cast portion of the treadle extending into the loophole he refers to it as a "trunnion;" and wherever he refers to the bearing he refers to it as a "trunnion bearing." Cramer uses the words "trunnion" and "trunnion bearing" eleven times in his specification, as follows:

> "B represents the two trunnions (1) cast as a portion of the treadle, and extending from its sides into loop holes in the common cast iron brace C. These trunnions (2) are sharpened to an edge or corner along their lower sides, and the lower end of the loop-hole is hollowed to an angle more obtuse than the edge of the trunnion (3) to serve as a bearing for the same. The treadle and its trunnion-bearings (4) are wholly independent of the cross-bar D. Pieces of leather F, or other soft material over the top and end of each trunnion (5) to serve as cushions to keep the same close in its bearings, to prevent the noise which would result were the trunnions (6) permitted to bounce and thump endwise, when the treadle is in motion. The leather F is fitted to the curve of the upper side of the trunnion (7), which is an arc of a cylinder whose center of oscillation is the lower end of the trunnion. (8) The same leather also interposes between the end of the trunnion (9) and the adjacent iron. This block conforms to the back and top side of the cushion and fills the loop hole in the brace above the trunnion (10). Below the bearings of the trunnions B (11)."

The claim contains, as we say, the word "trunnion" but once, in the following relation:

> "1. The vertical double brace joining the legs of the two ends of a sewing machine, *provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings,* substantially as specified."

It would seem from this that there could be no possible play of imagination as to what this patentee meant, and what his solicitors meant, by the use of the word "trunnions" in his specification and claim; and all of the detail of description in connection with the word "trunnion" shows that the inventor and his solicitor knew what they meant by the use of the word, and meant, and meant only, that the trunnion, and trunnion formation, and trunnion bearings, as disclosed by his specification and claim, and in the construction and combination there shown, was Cramer's invention; as is shown, for example, by one of the above quoted sentences in the specification, namely: "The leather F is fitted to the curve of the upper side of the *trunnion, which is an arc of a cylinder whose center of oscillation is the lower edge of the trunnion,*" and this is the trunnion contemplated in the claim "*fitted to oscillate in said bearings,* substantially as specified." Indeed, the whole specification is built around the fact that his two trunnions are cast as a portion of the treadle, and are to extend from its sides into the loopholes in the common cast-iron brace "C;" for after Cramer described exactly and precisely what these trunnions were, what they were intended for, and illustrated in his drawings their application, he then occupied nearly half of his specification with a description of the particular devices which he had found necessary to ally with his

trunnion construction and its combination with the other associate parts to make them operative.

What, then, is a trunnion? Two definitions of the word appear in the record as submitted to the jury, one from the Century Dictionary (Rec., p. 62):

> "1. One of the cylindrical projections on the sides of a cannon cast or forged in one piece with the cannon itself, which support it on its carriage. In the United States artillery service the diameter of the trunnion in smooth-bore guns has generally been equal to the diameter of the bore. See cut under howitzer.
>
> "2. In steam engines, a hollow gudgeon on each side of an oscillating cylinder, which supports the cylinder, and through which steam is received and exhausted."

And one from Knight's Mechanical Dictionary (Rec., p. 126):

> "Trunnion: 1. (Steam-engine.) One of the hollow axes on which the cylinder of an oscillating steam-engine reciprocates, and through which steam is received and exhausted.
>
> "2. (Ordnance.) One of the cylindrical projections from the side of a cannon or mortar which rests in the cheeks of the carriage, forming supports for the piece and an axis on which it turns during elevation or depression.
>
> "3. A general term for an axis of similar character to the above."

Webster defines trunnion as follows:

> "Trunnion: A cylindrical projection on each side of a piece, whether gun, mortar, or howitzer, serving to support it on the cheeks of the carriage.
>
> "2. A gudgeon on each side of an oscillating steam cylinder, to support it. It is usually tubular to convey steam."

Entirely confirmatory of the construction and operation of the trunnion itself, purpose and use, and distin-

guishing characteristics, is the testimony of Mr. Seely, expert for the Cramer patent, in this case, and as shown by the following question and answer (Rec., p. 136):

> "Q. Do you know of any instance in mechanics —where a device is called a trunnion unless it itself oscillates or revolves with another oscillating or revolving device which is supported by those trunnions?
>
> "A. No, sir; I do not.

As bearing entirely upon this point under discussion, this same expert, when pushed to a direct answer as to whether or not there was any trunnion construction or operation present in the Diehl or Singer device, testified as follows (Rec., p. 138):

> "Q. Then you do not find in the defendant's machine any device that operates as a trunnion operates, do you—that is, by oscillating with the treadle?
>
> "A. No, sir; I do not."

There being, then, absent from the Singer or Diehl device any trunnion of any description, or any device that operates as a trunnion, as sworn to by the expert for the Cramer patent, and there being absent from the Singer or Diehl stand or device any extension whatever fixed or movable from the side of the treadle, and such treadle only resting and riding upon the ends of fixed-point center screws, entering a recess in the sides of the treadle—it would seem to be unquestioned that there is absent entirely the trunnion element of Cramer's first claim from the defendant's device, and that there has been no substitution of any device or element of any description, mechanical or otherwise, therefor.

In the case of *Pettibone* v. *Stanford*, 48 Fed. Rep., 302, where the opinion was given by the late Judge Gresham,

and afterwards confirmed and adopted by the Court of Appeals for the Seventh Circuit, the exact question as to the presence and definition of the word "trunnions" in the claim of the patent was passed upon. In that case the claim contained as one of its elements "trunnions working in journals at the tops of the arms;" and an attempt was made in that case to cover a device where the trunnions did not work in journals, but were rigidly united to the journals, and worked in an opposed part, the court said:

> "Trunnions working in journals cannot mean trunnions rigidly united to the journals. . . . The complainants' expert in effect eliminates from the claim words which are not at all ambiguous, but have a clear and distinct application, and imports into it language which is unwarranted by the specification. . . . The language of the claim is explicit and clear, and the court is not at liberty to enlarge it beyond its plain scope; nor can the complainants be allowed to show by experts that the invention is broader than the terms of the claim."

Controlling words of limitation and description of Cramer's first claim without relevancy or application to the Singer or Diehl device.

There are several identifying and descriptive words that are essentially matters of identification and limitation of the structure identified by Cramer's first claim, that show the impossibility of any analogous construction in the Singer device, and the impossibility of such words of limitation and description being applicable to the Singer devce.

The words "holes through" the lower extremities of Cramer's double brace in the first claim have a particular and peculiar significance and meaning, without which the

device itself would be without utility or capability of operation. There must not only be holes in the lower extremities of Cramer's double brace to serve as bearings, but the "*holes*" must be "*through*" these extremities. If the "holes" were not "through" the lower ends, the Cramer combination, as shown in his patent, would be an impossibility for two reasons: (1) Because the bearing ends of the trunnions could not be placed in the holes; and (2) because the treadle bearings, after being placed in position, could not be held and fastened in place and made operative unless the cushion block could be inserted in the "holes" from the outside of the brace to furnish a side and top backing and cushion for the ends of the trunnion, and to keep it down to its work.

There are no holes through any part of the cross-bar of the Singer or Diehl construction that serve as bearings of any description, or which can by any possibility be mistaken for any such purpose.

Again, the words "fitted to oscillate in said bearings," as used in Cramer's first claim, have a peculiar and particular limitation and significance as there used. Cramer's trunnions have to be "fitted" to oscillate in their bearings. The specification shows how they are fitted; that is, the trunnion bearings are made V-shaped to oscillate upon a knife edge; the "holes" are "hollowed to an angle more obtuse than the edge of the trunnion, to serve as a bearing for the same and permit the rocking motion common to treadles;" and the trunnion bears against a cushion block that fills the hole immediately above the trunnion, as shown in Fig. 2. This shows fully and entirely what is meant by the term "fitted to oscillate in said bearings," as set forth in said claim.

While in technical language, the long vertical loops,

which are the "holes" in the lower extremities of the cross-brace, are not confined to the descriptive words of the claim to "long vertical loops," still these "holes" are confined to such particular construction, and their form must be read into the claim for two reasons: First, because these long vertical loops must be of this character to " permit the entrance of the treadle," and it is so stated in the specification; second, because Cramer's first claim claims these "holes substantially as specified."

None of these characteristics, limitations, and necessary restrictions placed by the patentee upon his first claim are found in the Singer or Diehl device; nor any construction and combination of parts "fully described and claimed" of the Cramer patent, that can by any possibility be mistaken for them.

The changes in treadle arrangement that the Singer Company made in adopting the Diehl stand and treadle, shows that there is no relationship between the invention of Cramer and the invention of Diehl.

The stand and treadle used by the Singer Company prior to its adoption of the Diehl device shows the natural change that must be made in adopting the Diehl invention of hanging the treadle on the cross-bar, and the driving wheel in a loop in the vertical cross-brace cast as a unit connection with the cross-bar, to assure an alignment of the pitman connection.

The Singer stand and treadle prior to the Diehl device consisted of the usual vertical double cross-brace of sufficient strength to hold the stand together without the cross-bar. The treadle of that stand was carried by point center screws passing through the web of the legs, and

the treadle had a long arm from each side cast solid with it, the point center screws passing into recesses in the ends of the arms.

In adopting the treadle and brace of the Diehl stand, the Singer Company, to secure an alignment of the pitman (the essentiality of the Diehl device) cut the treadle arms off completely and entirely from the treadle, made a cone-shape recess at the sides of the treadle at the points where the rteadle arms were cut off, and then used the same point center screws they had used in their old device, upon which to mount and swing the treadle. In doing this, and in making these changes, there was an evident impossibility of their adopting the "construction and combination of parts fully described and claimed" in the Cramer patent; and they necessarily, in fact, employed, as to purpose, object, function and result, the exact antithesis of those parts without a semblance of parallelism between the two, and having nothing in common, except the treadle motion present in every sewing machine manufactured from the beginning.

We respectfully submit, therefore, that not only is there absent from the Singer or Diehl device, stand and brace, two of the essential elements of Cramer's first claim, namely, the vertical double cross-brace and the trunnions, and that there is no substitution of any mechanical element or device of any nature or description therefor; but that the presence of several words of description and limitation appearing in the claim as above presented and discussed simply make it impossible that infringement can be found in the structure represented by said Singer or Diehl stand and treadle.

Under the construction, contended for the Cramer patent by his counsel, such patent represents a mere aggregation and not a patentable combination.

We have thus far laid no stress upon the question as to whether or not the particular devices exhibited by Cramer's patent discloses patentable novelty or invention or even an improvement. We have not considered that it was necessary to discuss this question in view of the fact that the Singer or Diehl device is so widely different therefrom as to bar any contention of infringement of Cramer's first claim; but if Cramer's patent is to be construed so broadly as to mean the hanging of a sewing-machine treadle in or in connection with the lower depending ends of a vertical cross-brace by any means and in any manner, then we respectfully submit that such patent and claim represent a mere aggregation of parts, instead of a patentable combination of operative elements.

There is certainly no joint action between Cramer's fixed and immovable vertical double cross-brace, as a brace, and his treadle, oscillating upon knife edges formed upon the outer ends of trunnions cast solid with the treadle, and the whole dropped into position in the holes in the ends of the vertical cross-brace. Indeed, there is no new action or alliance, broadly, by this combination. Whatever action there was was the action of the treadle, the band-wheel and the pitman; and this action was not new, but was the same action that was present in all of the sewing machines going before Cramer. The most that even Cramer claims for his construction is an asserted improvement of detail construction over old mechanical devices long used for the same result.

Cramer nowhere claims any new result as to kind, and at the most, only as to degree. Whatever may be the contention for the Cramer patent, as to the wildest and broadest assertion made for it, to the extent even of the exclusion of all its limitations and terms, such contention only goes to the degree of improvement, and not to any new kind of result, and would therefore appear to bring the patent thus construed under a long line of decisions of this court, finding the invalidity of patents where there is no new joint action or result produced by the combination of elements, and that such combination stands for merely an unpatentable aggregation of parts, without dependence of such parts as to action the one upon the other.

In this view of the Cramer patent, the case in this court of *Wright* v. *Yeungling*, 155 U. S., 47-53, well describes such condition and conclusion as applied to this Cramer patent, namely:

> "The cylindrical guide performs the same functions as the prior patents; the trough, in which the connecting rod works in the Farrar patent, is practically the same as in the Wright patent, and the combination is a mere aggregation of their respective functions. If the combination of the trough and cylindrical guide of the Wright patent *gives greater lightness and strength to the frame than the combination of the trough and the flat guides of the Farrar patent, it is a mere difference in degree, a carrying forward of an old idea, a result, perhaps, somewhat more prefect than had theretofore been attained, but not rising to the dignity of invention.* We have repeatdly held patents of this description to be invalid. *Stimpson* v. *Woodman*, 10 Wall., 117; *Smith* v. *Nichols*, 21 Wall., 112; *Guidet* v. *Brooklyn*, 105 U. S., 550; *Halls* v. *MacNeale*, 107 U. S., 90."

The fact that the Singer or Diehl device is manufactured strictly and entirely under and in accordance with the Diehl patent, strongly presumptive of the fact of non-infringement, and persuasive evidence that such device is a new and different invention, and the jury should have been so instructed.

As has been repeatedly called to the attention of your Honors, and as to which there is no contention, that the single device proceeded against as an infringement of Cramer's first claim in this case is the exact and precise device shown, described and claimed in the Deihl patent. The plaintiff in error, Singer Company, justifies and defends under such patent in its answer, admittedly so shown and proof taken. (Rec., p. 20.) A series of in-instructions drawn in behalf of the plaintiff in error founded upon this fact were asked for and refused by the trial judge, such instructions being 36, 37, 40, 41, 42, and appearing upon pages 442-4 of this Record.

These instructions were drawn to cover and express the different applications of the rule as laid down by this court, and founded upon such fact, to the effect that the patent manufactured and justified under is *prima facie* evidence of the truth of the facts asserted in it, and *prima facie* evidence that the device manufactured under such patent is not an infringement of a previously granted patent sued upon.

All of Plaintiff-in-error's instructions as to this matter were refused. Instructions 37 and 40 fairly state the rule as asked, as follows:

Refused instruction 37.

"The jury are instructed that the defendants' patent is *prima facie* evidence that the alleged inven-

tions which are covered by its claims were new and useful when they were made by said Philip Diehl, the plaintiff's assignor, and in this respect the defendants' patent is *prima facie* evidence for the defendant to the same extent as the plaintiff's patent is *prima facie* evidence for the plaintiff."

Refused instruction 40.

"As to whether the sewing machine stands which have been made, used and sold by the defendant are covered by the claims of the Diehl patent or not is an important question in the decision of this case. Because in so far as the claims of the said Diehl patent cover the construction or combination of mechanical devices shown therein, the said patent is *prima facie* evidence that such construction and combinations do not infringe upon any prior patent. The construction and combinations that are covered by the claims of the said Diehl patent constitute a decision of the Patent Office that the same were, when the patent was granted, both new and useful, and also that said Philip Diehl was the first and original inventor thereof;"

which said instruction the court refused to give as requested.

It is difficult to conceive why these instructions were refused under any and all of the decisions of this court bearing upon this precise subject, and it is indeed equally difficult to understand why the following excepted to, instruction was given by the court, instead of all the instructions asked by plaintiff in error upon this point. the court instructing as follows, in exception 64. p. 450:

Court's instruction 64.

"If you determine that the Diehl structure is in some respect an improvement, but not otherwise an infringement of Cramer's patent, the fact that the

> patent was issued to the defendant for the Diehl structure subsequent to Cramer's patent will afford no protection to the defendant against the charge of infringement. It very frequently happens that after a patent is issued to one person another may subsequently secure a patent as an improvement upon the first, but such subsequent patent affords no protection to the holder thereof against the charge of infringement of the first patent if, as a matter of fact there be an infringement."

What the jury could understand from an instruction of this kind, it is difficult to conceive; but that they could not understand from such instruction that the issue of the Diehl patent raised a like presumption in its favor as the issue of the Cramer patent, and that the devices of the Diehl patent were presumptively not an inringement of the Cramer patent thereby is certainly manifest.

The earliest annunciation of the rule of this court is found in the case or *Corning* v. *Burden*, 15 How., 252, 271, where Mr. Justice Grier, speaking for the court, after referring to the fact that patents are only granted "after an inquisition or examination, made by skiliful and sworn officers, appointed for the purpose of protecting the public against false claims or useless inventions," said:

> " Consequently such a patent may be, and generally is, received as *prima facie* evidence of the truth of the fact asserted in it. And in cases where the evidence is nicely balanced, it may have weight with a jury in making up their decision as to the plaintiff's right; and if so, it is not easy to perceive why the defendant who uses a patented machine should not have the benefit of a like presumption in his favor, arising from a like investigation of the originality of his invention, and the judgment of the public officers, that his machine is new, and not an infringement of the patent previously granted to the plaintiff."

Since this decision the rule there declared, has been

applied and appears in many subsequent cases. A more recent statement of the rule appears in the case of *Boyd* v. *Jansville Hay Tool Co.*, 158 U. S., 260, 261, there the court speaking through Mr. Justice Shiras, adopts the language of Mr. Justice Strong in *Pavement Co.* v. *City of Elizabeth*, 4 Fish., 189, as follows:

> "The grant of the letters patent was virtually a decision of the Patent Office that there is a substantial difference between the inventions. It raises the presumption that, according to the claims of the latter patentees, this invention is not an infringement of the earlier patent."

The rule as thus stated by this court is recognized by the leading text writers (Robinson on patents, pp. 1016, 1041.)

Many important and leading cases can be found at the circuit showing the observance and application of this rule. In the case of *Ney* v. *Ney Mfg. Co.*, 69 Fed. Rep., 405, 408, the Circuit Court of Appeals for the Sixth Circuit, speaking through Judge Taft, said:

> "Though the patents were not pending in the office at the same time, the presumption from the granting of the second patent in view of the previous issue of the first, would not seem to be different."

In *Powell* v. *Leicester Mills Co.*, 103 Fed. Rep., 476, 487, at the circuit, Judge Gray thus stated and recognized the rule:

> "These patents were granted to defendant two years and four months after the date of the patent in suit. The grant is to be presumed to have been made after a full examination by official examiners, with the prior state of the art fully in view, especially as the same is shown by previously granted patents. There can be no reason why the presumption of validity and non-interference with any prior patent should not obtain as strongly in defendant's favor as

> it does in favor of the patent in suit. In considering the weight of the testimony, as to all points bearing on the question of infringement, this presumption must be kept in view. The cases cited by counsel for the defendants in this regard fully sustain this proposition."

Also in the case of *Illinois Steel Company* v. *Kilmer Mfg. Co.*, 70 Fed. Rep., 1012, 1015, Judge Townsend tersely states the rule thus:

> "The grant of this latter patent for a machine designed to accomplish the same result as that of the patents in suit raises the presumption that there is a substantial difference between them, and that the latter is not an infringement of the earlier patents."

We cite these decisions of the lower courts because the respective Judges delivering the opinions seem to have given careful and unusual attention to the facts submitted. Can anything be more apparent in this case than the fact that the skillful and sworn public officers who granted both of these patents (Cramer and Diehl) did not and could not have had the faintest suspicion that there was anything in common between the two patents, or that one was in any conflict with the other, or in any way related to each other, except generally as to the common subject matter, of a multitudinous class in the Patent Office? And finally, could the jury have had the faintest suspicion from the court's instruction 64 above quoted, that the issue of the Diehl patent, was *prima facie* evidence of its validity and *prima facie* presumptively that it was not an infringement of the Cramer patent, and that the grant of the Diehl patent was virtually a decision of the Patent Office that it differed substantially from the invention of Cramer's patent, and was not an infringement thereof?

The court took from the jury by this instruction the

right of presumption going to Diehl by reason of the issuance of his patent. Indeed the jury must have understood from the court's instruction 64 that there was no presumption whatever as to the matter of infringement, or even as to the validity of the Diehl patent, or the fact of the non-infringement by the Diehl structure of the Cramer patent. The court starts out with the proposition to the jury that they must first determine whether the Diehl structure is an improvement at all saying nothing about the Diehl patent; and the instruction seems to be deliberately and carefully drawn so as to avoid any instruction to the jury, that by reason of the *prima facie* presumption in favor of the Diehl patent, the device of that patent is not an infringement of the Cramer patent; and this in the face of the fact, that the burden of proof establishing infringement is upon the plaintiff. *Agawam Co.* v. *Jordan,* 7 Wall., 583; *Seymour* v. *Osborne,* 11 Wall., 516; *Fuller* v. *Yentzer,* 94 U. S., 288; *Imhauser* v. *Burke,* 101 U. S., 647.

The action of the trial Judge in giving the instruction that he did in this case, and in refusing the instructions asked by the Singer Company, Plaintiff-in-error, and the action of the Court of Appeals in refusing to disturb the ruling of the trial Judge in this matter, is all the more inexplicable for the reason that the court itself had recognized and laid down, and enforced this rule of right in the most comprehensive and positive manner, and had reversed the judgment of the trial court in another case and remanded the case for a new trial by reason solely of the misapprehension of the trial court as to such rule. In the case of *Ransome* v. *Hyatt,* 69 Fed. Rep., 148, the Court of Appeals of the Ninth Circuit, speaking upon this precise point, says:

"The only assignment of error necessary to be considered is the refusal of the court to instruct the jury concerning the effect to be given to the fact that a patent had so issued to the defendants. . . . The recent cases, however, of *Miller* v. *Manufacturing Co.*, 151 U. S., 208, 14 Sup. Ct. 310, and *Boyd* v. *Tool Co.*, 15 Sup. Ct. 837, citing *Pavement Co.* v. *Elizabeth*, 4 Fish. Pat. Cas., 189, Fed. Cas. No. 312, expressly affirm the doctrine of *Corning* v. *Burden*, and hold that the issuance of the defendant's patent creates a *prima facie* presumption of a patentable difference from the prior patent of the plaintiff. The Plaintiff-in-error was entitled, therefore, to an instruction which would permit the jury to consider the presumption that the law creates from the fact that a patent has issued in any case. The judgment will be reversed at the cost of the defendant in error, and remanded for a new trial."

The doctrine of mechanical equivalence, broadly, without any opportunity of application in this case —the opinion of Cramer; of no consequence upon the question of infringement.

We think we have shown clearly to your Honors that this Cramer patent, construed, as it must be, in the light of the file-wrapper and contents, shows only a patent and a claim for a special construction and arrangement of devices, and that from the face of the patent itself it is so limited and prescribed that nothing can come within the terms of its specification or claim, except those devices identified thereby. So understood and so construed, there can be no possible assertion that the Singer devices come under any description in the Cramer specifications, or can be identified in any way by his first claim. The sewing machine itself, as a structure, has been the subject of a more wide range of patents upon every part thereof than

any other single machine used in the industrial arts. Their issue has been simply nebulous. It has scarcely been possible in this generation of men that anything in the shape of a pioneer or primary invention or patent could be obtained upon a sewing machine, or that any construction can be given to any sewing machine patent broader than the special devices included in the patent, even and although the patentee has so attempted to claim in the patent itself. In the case of *Standard Sewing Machine Co.* v. *Leslie,* 78 F. R., 329, the Court of Appeals for the Seventh Circuit, speaking upon this precise point, says:

> "It is matter of common knowledge that for many years sewing machines of many and different modes of operation had been in use and were upon the market, so that it was questionable whether in the then state of the art improvements could be effected which could be properly classed within the domain of invention, or be deemed other than mechanical equivalents."

A reading of Cramer's deposition shows that in his entire testimony he made no reference whatever to his patent and the invention therein shown and described to the jury, except when forced to by interrogating counsel. The whole burden of his song was that his invention consisted in the hanging of his treadle in the lower ends of the cross-brace, and that it made no manner of difference as to the mechanism by which such treadle was hung.

We respectfully submit that, under all authorities, Cramer cannot be permitted to abandon his invention, as shown and expressed in his patent and identified by his claim, or give any other construction to it than that which is justified on the face of the patent itself, and in the light of the file-wrapper and contents. The wisdom after the event cannot be invoked by Cramer at this day. It is not what Cramer *says now,* but what he *said then* that gov-

erns; it is not what Cramer *does now*, but what he *did then*, as shown by his patent, that governs. The law upon this subject is well expressed in the case of *Foss* v. *Herbert*, 2 Fish., 31, where the court says:

> "The theory of the patentee and his opinion as to his invention, is of no consequence upon the question of infringement."

If there should be any doubt in the mind of the court after construing this patent, as to whether or not under any construction given, the device of the Singer Company can be swept under Cramer's first claim, we earnestly again call the court's attention in this connection to the unbroken line of decisions to the effect that the act of infringement is a tort or wrong, and that the burden of proof is always upon the plaintiff and never shifted, to establish such fact of infringement.

Seymour v. *Osborne*, 11 Wall., 516.
Fuller v. *Yentzer*, 94 U. S., 288.
Imhauser v. *Buerk*, 101 U. S., 647.
Agawam v. *Jordan*, 7 Wall., 583.

Two rules of right, and of guide, as laid down by this court, clearly indicate the impossibility of invoking the doctrine of equivalence in any other than in a narrow and restricted sense in this case. In the case of *McCormick* v. *Talcott*, *supra*, this court said:

> "The inventor of the first improvement cannot invoke the doctrine of mechanical equivalence to suppress all other improvements which are not merely colorable invasions of the first."

Bearing in mind, also, that Cramer's invention, as stated by him in his patent, consists in "The construction and combination of parts fully described and claimed," the question of infringement is disposed of by the state-

ment of the rule in *Prouty* v. *Ruggles,* 16 Peters, 341, where this court says:

> "It is not the same combination if it substantially differs from it in any of its parts."

This record is absolutely barren of any proof, reliable or even plausibly speculative, showing, or tending to show, that Cramer has suffered any damage whatever by reason of any act or thing done by the Singer Company, and therefore the jury should have been instructed to find nominal damages only.

It is earnestly contended that there is not even the scintilla of proof found sufficient in the earlier cases to support the verdict of the jury—in this record—to establish the fact that the defendant in error, Cramer, has suffered any damage of any kind, name, nature or description by reason of any act or thing done by the Singer Company, as disclosed by this record.

The Cramer patent contains two claims. There was no contention at the trial of the case that the second claim had been infringed by the Singer Company. Such contention, although made in the declaration filed, was withdrawn by Cramer's counsel before the opening of the case to the jury. (Rec., p. 36.) Aside, then, from the fact that there is no testimony in this record showing any damage, actual, or speculative, accruing to Cramer by reason of any act of the Singer Company, this fact and condition is intensified and made certain by the admitted fact that there was no contention that the Singer Company had infringed Cramer's second claim. The unqualified and uncontradicted testimony itemized and in detail in this case, from the lips of Cramer, repeated time and

time again, and from the uncontradicted testimony of the officers and managers of the Singer Company having knowledge of the fact, make certain and give ample reasons therefor, that it was simply an impossibility for Cramer to have been damaged in any way by any act or deed of the Singer Company, relating to his patented invention—and that he never was so damaged in any item or particular.

Several instructions were asked by the plaintiff in error, the Singer Company, and refused by the court, founded upon these facts and conditions in the record. Such refused instructions, with the exceptions thereto, are represented by exceptions 24 and 25 (Rec., p. 404-5), and are the requested instructions to the jury to find nominal damages only, as follows:

> "24. It is admitted by the plaintiff that there has not been any infringement by the defendant of the second claim of the patent. Damages are now claimed for an alleged infringement of the first claim of the patent only. The jury, therefore, should not pay any attention to the second claim of the patent, but should decide the case just as though that claim were not in the patent at all.
>
> "25. The plaintiff has not introduced any evidence tending to prove any damages that have resulted to him from any infringement of said first claim alone. If, therefore, you should find that said first claim had been infringed by the defendant, the damages assessed should be nominal, that is, one dollar, and no more."

The contention is in behalf of the plaintiff in error not only that Cramer has not introduced any evidence tending to prove any damage that has resulted to him from any infringement of his first claim alone, but that there is no proof or evidence present of any damage of any description to the plaintiff Cramer as to either of the claims,

or that he has suffered any damage of any description. The only testimony in this case as to this matter of damage was the testimony of Cramer alone, and possibly the testimony of his son and daughter, who were children at the time of the supposed happening of the events. Cramer's own uncontradicted testimony shows that he was simply a dealer in a small way in new and second-hand sewing machines, and that he was not a manufacturer, and that he treated the alleged inventions of his patent simply as an attachment to a sewing machine, which could be put in and taken out of all of the different types and styles of sewing machines manufactured at that time. There is no testimony in this case from any party who ever cast any of the parts of Cramer's devices, as shown by his patent, that such devices were ever cast, much less that they were ever put into a sewing machine. No dealer in sewing machines was called who ever saw, or knew of the devices of Cramer being put into any machine. No user of any machine was called by Cramer as a witness who testified even to the presence of the device in his machine. As above stated, the entire testimony as to these matters was confined to Cramer and his two children. Cramer's testimony shows that he never had but two sets of castings made containing his supposed inventions; the first set of six or seven cast in January, 1881; and the other of thirty-five or forty, early in the year 1883; and that the entire number of such castings containing his inventions put in machines was between thirty-five and forty; that he first commenced selling machines having his patented device in them in the year 1881, and ended in the year 1885.

We propose, in the discussion of this subject, under several different clauses immediately following, to present every word of testimony of Cramer in this case, or

of his son or daughter, having any relevancy to this question of damages; and it needs simply a reading of this testimony to furnish absolute conviction of the statement that this record is barren of any proof or testimony showing any damage to Cramer by any act of the Singer Company but upon the contrary otherwise. We again use the italics to bring into notice particular statements of Cramer in connection with the same testimony offered hereafter to enforce different contentions.

The testimony of Cramer shows that he positively finally ceased the selling of any sewing machines with his brace therein in the year 1885, and that in all probability he ceased any attempt to sell his braces in sewing machines in the year 1884. Cramer testified positively and unequivocally to these facts and dates in detail, having the receipts which identified the dates of the manufacture and casting of the braces, and he testified to these facts not only upon the direct examination by his counsel, but over and over again at different times in his cross-examination, and we here quote in full from his testimony such questions and answers as make absolutely certain and assured these facts, as follows:

"Q. *I say, you commenced selling your patent in 1881?*

"A. *Yes, sir.*

"Q. *And you continued to manufacture them until some time in 1885, when you stopped?*

"A. *Yes, sir; that is right.* (Rec., p. 45.)

"Q. *How many machines did you say you succeeded in selling with your treadle arrangement in it with those trunnions and knife edges in it?*

"A. *Between twenty-five and forty.*

"Q. How many years did you have them on the market?

"A. I had them manufactured, the bulk of them I had manufactured in 1883 at the O. K. Foundry. (Rec., p. 77.)

"Q. When did you first put in any machine such a combination as is described in your patent?

"A. In 1880 had it all complete.

"Q. When did you first commence *selling machines having that combination?*

"A. *In 1881.*

"Q. For how many years did you continue to sell them?

"A. *From 1881 up to about 1884,* or somewhere along there, 1884-1-2, or somewhere along there—until they came up there with theirs.

"Q. *Yes, but in that four years' time you sold between thirty-five and forty?*

"A. *"Yes, sir, that is it."* (Rec., p. 79.)

"Q. How many sewing machines did you sell all together during that time, those that did have your patented device, and those that did not?

"A. I could not tell you. I think I sold about—well, *from about ten to eighteen a month.*

"Q. All together?

"A. Yes, sir.

"Now understand me. In 1883 I came down here and I had these castings made at the O. K. Foundry, and then I shipped them up to Sonora, and then I put them on machines *and sold them very rapidly, had no trouble in selling them at all."* (Rec., p. 80.)

"Q. You averaged about one a month that had this combination with your patent in, while you were averaging from ten to eighteen a month all together?

"A. *I sold them in a little while after I had them cast. It did not take me long to sell them.* I did not sell them so many a year." (Rec., p. 79.)

"Q. You had your patterns made so you could get castings during that entire four years?

"A. *Yes, sir.*

"Q. You were selling machines at the rate of ten or eleven per month?

"A. Yes, sir.

"Q. *Yet in all that time you only sold thirty-five or forty machines of your patented device?* (Rec. 80.)

"A. *Yes, sir.*

"Q. *When did you sell these thirty-five or forty machines?*

"A. *In 1883 I had those manufactured at the O. K. Foundry on Mission Street, and then I took them up there, and I don't know how long it took, but not long, to sell them off.* (Rec., p. 81.)

"Q. How many sets of castings for this Cramer combination did you have made in 1883?

"A. *There were thirty-five or forty of them made in 1883.*

"Q. How many did you have made before 1883?

"A. *Oh, I don't know; six or seven or somewhere along there. . . . The first one was cast in January 1881.*

"Q. Do you know how many sets of castings for this combination you had made in 1881?

"A. I don't know—four or five—somewhere along there. . . .

"Q. When did you sell those six or seven machines that you first put the combination in?

"A. *I could not give you the date now, just exactly when.*

"Q. *Along in what years?*

"A. *I sold them that year.*

"Q. *1881?*

"A. *Yes, sir.* As near as I can remember, I sold them that year.

"Q. When did you take any further steps to have any more castings made?

"A. In 1883 I came to San Francisco, and I had this lot cast.

"Q. What time in 1883 did you get those castings?

"A. I don't know whether I have got the receipts with me or not, but *I think it was in the early part of 1883.*" (Rec., p. 82.)

The testimony of Cramer himself shows conclusively that since the year 1885 he never even attempted to sell a sewing machine in which he put a brace with treadle hung as shown in his patent. The truth of this fact appeared several times in his testimony when the direct point was

not in his mind, as exhibited by the following questions and answers:

"Q. What was the highest price you sold one of these machines for in 1885 or 1886 that did not have your treadle in it?

"A. I think I was pretty well run out of the business at that time. I could not tell you. Yes, I was pretty well run out of the business. I don't know whether I sold any that year.

"Q. *Did you sell any in those two years?*

"A. *I don't believe I did.*

"Q. Do you know when you sold the last machine that had your treadle in it?

"A. *About the year 1884 or 1885.*"

We therefore say that several facts and conditions of controlling importance are made absolutely certain by Cramer's said testimony, viz.:

First, that between the years 1881 and 1885 Cramer had manufactured and cast not to exceed forty of his combined braces and treadles.

Second, that this number of braces and treadles were manufactured or cast at two different times in two lots; the first lot, four or five in number, in the year 1881, and the second lot of thirty-five or forty in the year 1883.

Third, that Cramer sold the first lot of four or five treadles in that same year, 1881, the same year he had them cast, and that he sold the second lot that he had cast in the year 1883, *"in a little while after I had them cast in the year 1883."*

The above was the extent of the *"business"* that Cramer had built up between the years 1881 and 1885, as clamed by himself, in his combined treadle and brace, and the above is the *"business" and "business" only* that the Singer Company is alleged by Cramer to have interrupted and the damages to such *"business" alone* that the verdict of $12,456 of this jury is founded upon.

Nothing is more positive from Cramer's testimony than that he never cast, or attempted to have cast or manufactured, any other lot or batch of castings of his combined treadle and vertical cross-brace after the lot or batch that he had cast at the O. K. Foundry on Mission street, San Francisco, in the early part of the year 1883; and that he put all these castings of cross-brace and treadle in sewing machines immediately after their casting—*"I sold them a little while after I had them cast." "It did not take me long to sell them,"* says Cramer. And it is absolutely certain from Cramer's testimony that the first batch of castings, four or five in number, of his brace and treadle that he had cast in the year 1881 were sold in the year 1881—*"I sold them that year,"* testifies Cramer.

It is true that Cramer *says* he continued to sell these thirty-five or forty treadles and stands until "they (Singer Company) came there with theirs;" but this statement of Cramer's is manifestly a ridiculously untrue assertion without any foundation as to fact, and in direct contradiction of all the facts testified to by him. Such statement represents simply an expressed conclusion upon his part, and is as incongruous and unnatural as that other statement and conclusion asserted to be made in the same locality about the date of the grant of this Cramer patent, that "we are ruined by Chinese cheap labor."

Cramer seemed to understand well the significance and importance of the statement appearing in this record that the reason he never had any further set or lot of castings made of his brace and treadle after the early part of the year 1883 was because the Singer Company came up in his part of the country with machines having therein the Diehl brace. We shall show hereafter by undisputed testimony the unfortunate character (for Cramer) of this

assumption; but the supposed relevancy by Cramer of this condition as a necessary fact to appear in this case seems to have been well understood by him. Cramer, however, made one serious mistake in stating this conclusion or opinion as a relevant fact, in this: That he supposed he was safe in fixing the year 1884 or 1885 as the last year in which he sold his treadle and brace, because the Diehl patent was granted in the year 1884, and it would take about that length of time after such grant for the Singer Company to get its machines having the Diehl brace upon the market in California, and that therefore he would be perfectly safe in fixing that date as the date when the Singer Company "Drove him out of *business.*" Cramer made a serious mistake in this assumption, and by the error and falsity of such assumption on his part completely barred any semblance or *scintilla* of evidence in this record to establish damages for any acts of the Singer Company in relation to his business. The recollection of Cramer as to the precise year or years when he sold these thirty-five or forty braces, between the years 1881 and 1885, may not be exactly accurate, but there is one thing that he does know, and must of necessity recollect, and which he swears to positively, and that is that he put in and sold this combination brace and treadle a *"little while after he had them cast,"* and that "it did not take him long to sell them; a little while after he had them cast," and further that he had memoranda and data to fix absolute dates of casting of the two sets of castings, namely, in the years 1881 and 1883.

The mechanism of the Diehl patent complained of as an infringement of Cramer's first claim, not in the California market until the year 1887.

Let us now see from the *testimony* if this *"business"* of manufacturing thirty-five or forty treadles in five years, as alleged by Cramer, has been interrupted or damaged in any way by any act of the Singer Company.

The full, complete and uncontradicted testimony in behalf of the Singer Company in this case shows clearly and conclusively that the Diehl stand and brace complained of were not sent to California by the Singer Company earlier than the month of April, 1886, and were not put upon the California market (and then only in a small number) until the year 1887, owing to the large stock of old stands, treadles and braces then on hand. This testimony is sworn to by the managers, officers and foremen of the Singer Company, and such testimony is backed up and made certain by references to contracts and printed matter, and is in entire harmony with the practice of the Singer Company of first installing in its eastern territory machines containing any alteration or change, so that if any defects are developed therein, the machines will be near its manufacturing plants, for alteration or correction.

Let us see what this testimony is:

John A. McMillan, of San Francisco, has been employed with the Singer Company in that city for nineteen years as shipping and receiving clerk, whose duties were to "take note of all the machines that went out, shipping them to various markets, . . . and setting up all machines in my department." (Rec. 290.) Mr. McMillan testifies that the Diehl brace first came to the

Singer Company at San Francisco in 1886 or 1887, and that he has examined the books and finds that the first consignment of Diehl braces to the Pacific Coast was in April, 1886. (Rec., p. 290.) A significant fact was also developed by this witness, that this Diehl brace was termed by the employees the *"stand of 1887,"* as shown by the following question and answer:

> "Q. Was there any other name given among the employees by which to indicate that brace from others?
>
> "A. *We called that stand the stand of 1887. That is the first stand of the kind that we got with the Diehl brace in it;* and that machine was called the Improved Family Machine." (Rec. 290.)

Mr. McMillan testified that he had made special search through the books and ascertained that April, 1886, was the date when the Diehl braces were first received at San Francisco. (Rec. 290.) McMillan did not know, however, how long after April, 1886, it was when the stands were sent out to the trade. (Rec. 290.) He did know, however, that there was a "big stock" of the old style of stands in the Singer Company's warehouse in San Francisco when the Diehl stands were first received in April, 1886, and he does know that the Diehl stands were not put upon the market and sold as soon as they got there (Rec. 308); and that the Diehl stands have never been sold in California except through the Singer Company's San Francisco house. (Rec. 308.) Mr. McMillan was subjected to a long cross-examination by Cramer's counsel, apparently to establish the fact that Improved Family Machines had been received prior to 1886 without the Diehl stand. This fact, however, had no relevancy in the case because the Improved Family Machine was sold with both the Diehl and trade-mark stands. McMillan, upon further examination, testified

that he had a distinct recollection of the reception of the Diehl stands in San Francisco in 1886; that the stands were new to him, and that he did not remember seeing them before, and that the reason they then had the consignment of the Diehl stands was on account of the low rate of freights, McMillan stating that—

> "We loaded ourselves up with stuff that year on account of freights being low, and there was a prospect of freights being raised, and that . . . we always work our old stock off before starting in with a new lot. It was the rule of the house and is yet. We keep it up all the time." (Rec. 313-4.)

Mr. McMillan testified positively that those Diehl stands received in April, 1886, were the first he ever knew of, and the first he had ever seen. (Rec. 314.) He testified further that none of the new Family Machines had in them the Diehl treadle. (Rec. 314-5.) There was introduced in connection with Mr. McMillan's testimony, and so testified to by him, a catalogue of the Singer Company, as applicable to its California business in sewing machines and illustrative and descriptive of the sewing machines then sold by the company in California. (Rec. 316-7.) This catalogue bears on its face, as will be seen, the fact that the general agency of the Singer Company for the Pacific Coast was at *"22 Post street, San Francisco."* The sewing machines then sold by the Singer Company on the Pacific Coast are clearly illustrated and described in this catalogue, *and no Diehl stand appears in such illustration or description.* As absolute confirmation of Mr. McMillan's testimony he states, and his statement is undisputed, that *the Singer Company did not move to 22 Post street, San Francisco, until July, 1885.* (Rec. 316.) Of course this catalogue was not printed until after the Singer Company moved to Post

street in July, 1885, and of course the absence from it of any Diehl stands shows that the Singer Company at that date was not selling them in California, Mr. McMillan testifying again positively that the Diehl stands were not in San Francisco prior to 1886 (Rec. 319); Mr. McMillan also testifying that the old books of the Singer Company, for the year 1884 and prior thereto, had been burned up (Rec. 315), and testifying also that it would be a mechanical impossibility to place the Diehl treadles in the several thousand old trade-mark stands they had on hand at San Francisco in April, 1886. (Rec. 323.)

Charles F. Krantz, a machinist residing in San Francisco, and who has been in the employment of the Singer Company from 1872 to the present time, testified that he represented the Singer Company, selling its sewing machines in Central America from 1882 to May, 1888. Mr. Krantz testified to the suggestive condition that he received all of his stock of Singer machines in Central America from the Singer Company's house in San Francisco; that he always demanded, and had the San Francisco house send him the latest styles of machines, and that up to the time he left the Singer Company's business in Central America in May, 1888, no Diehl stands had ever been received by him.

Henry F. Blanchett, a bookkeeper in the employ of Singer Company for twenty years (Rec. 324-5), testifies to the moving of the Singer Company to 22 Post street in July, 1885; that the circulars and catalogue of the Singer Company in evidence, pages 316-7, with the Singer Company's address, 22 Post street, thereon, were not printed before the company moved to Post street, and that there were no cuts of the Diehl stand in this circular, and that the circular was printed by the Singer Company in the East. (Rec. 325.) Mr. Blanchett testified that

the name given to this Diehl stand by the employees was the "stand of 1887." (Rec. 326.) Mr. Blanchett testified positvely upon cross-examination that the Singer Company had no Diehl stands on the Pacific Coast in 1885 (Rec. 327), and that no sewing machines were received with the Diehl stand until 1886. (Rec. 328.) He testified to the same recollection as to the reception of these Diehl stands in 1886, by reason of low freight rates, as Mr. McMillan (Rec. 328), and that his personal recollection is that the Diehl stands were not received at 22 Post street until eight or twelve months after they had moved there in 1885.

Donald Mackenzie, who has been in the employment of the Singer Company since 1881 in the East, testified that he never saw or knew of the Diehl stand in the East before 1885 or early in 1886. (Rec., p. 331.)

From this body of uncontradicted testimony by these several witnesses having absolute knowledge of the facts, the fact is as certain as any fact can be made certain by human testimony that no Singer machine containing the stand or mechanism that is proceeded against as an infringement in this case was ever sold to the trade in California until two years after Cramer says he had ceased all attempts, even, to sell any sewing machine with his combined brace and treadle therein. It is, of course, impossible that the sale by the Singer Company of the Diehl sewing machines in California could ruin the "business" of Cramer that had not existed for two years, and which, evidently and manifestly, had simply ruined itself. We respectfully submit that the alibi of the Singer Company as to this matter is proven beyond all reasonable doubt.

The testimony shows that not only was Cramer not damaged in any respect by the act of the Singer Company, but the testimony shows that the acts of the Singer Company were of great benefit and advantage to Cramer and his patent, if his device was of any value.

It is a curious fact that the testimony in this case, and all logical deductions therefrom, show conclusively that the acts of the Singer Company not only did not damage Cramer in any respect in his sewing-machine business, but as a matter of fact furnished a market for him and his alleged invention, and an opportunity for a vast utilization and employment of such alleged invention. The testimony in this case is uncontradicted that for a long period of years, and up to the year 1887, the Singer Company had sold in the California market, and in and around the territory, as to counties, where Mr. Cramer says that during that time he was selling sewing machines —simply thousands of machines with the treadle hung independently of the cross-brace. (Rec. 325-6.) The testimony also shows by the California agents of the other leading sewing-machine manufacturers of the United States that since the years 1882 and 1883 simply countless thousands of sewing machines have been sold in San Francisco and the Northern District of California with their treadles hung independently of the cross-brace, and have no connection therewith. (Rec. 292-302.)

A good illustration of this fact and its relation to the Cramer patent is found in the deposition of Mr. A. T. Eggleston. (Record., pp. 293 to 299.) Mr. Eggleston was the general manager at San Francisco of the Wilcox & Gibbs machine, a machine approximately as widely known as that of the Singer Company. He has been such

agent for thirty years. Mr. Eggleston testifies that the Wilcox & Gibbs machine has never had any vertical double brace of any description in it, and that the treadles have always been hung during that time upon the tie-rod or cross-bar. (Rec. 293.) Mr. Eggleston also testifies that the Wilcox & Gibbs machine has been sold in this market in competition with other machines constantly for thirty years past, and that it is a higher-priced machine than any of its competitors. Could any condition exist more favorable to an immediate adoption and widespread installation of Cramer's "*business*" than that furnished by the Wilcox & Gibbs machine, for in this machine there was actually no vertical double brace at all, and the treadle was hung on the tie-rod or cross-bar? Of course, if Cramer's treadle and cross-brace would add anything to the value of a machine, the Wilcox & Gibbs Company alone furnished an unfailing market for his "*business*" of manufacturing combined treadles and cross-braces, and putting them in machines that were so radically defective as not to have even any kind of a cross-brace.

Another forcible illustration of the folly of Cramer's contention of damage by the acts of the Singer Company is found in the testimony of Mr. C. A. Hawkins (Rec. p. 266), who is general agent of the White Sewing Machine Company at San Francisco. The White machine has been on the market since 1876 (Rec. 266-7), and has always had its treadle mounted on the tie-rod or cross-bar (Rec. 267), Mr. Hawkins testifying that it would be impossible to hang the treadle in the cross-brace of the White machine (Rec. 267); also that the sales of the White Company in sewing machines equaled those of the Singer Company on the Pacific Coast, and that their Pacific Coast sales "will run from 150 to 800 or 900 a month. I suppose 400 to 450 would be an average." (Rec. 274.)

Here, then, is a sewing machine of another manufacturer with the treadle hung independently of the cross-brace, and with the sale of machines in the same territory as the Singer Company on the Pacific Coast, 400 or 450 a month. Again we say what an opportunity and field is thus open and assured for Cramer's "*business.*" All he would have had to do to establish a trade as to the White machine alone would have been to have gone to each user, point out to that user the defects of the White treadle and brace and put his treadle and brace instead.

There can be no doubt that Cramer could as easily have put his treadle in all of the leading sewing machines sold in California in the last twenty years as in the American machine, as one of his leading witnesses so testified. Such witness was his daughter, Mrs. E. S. Abbott, and speaking upon this exact point, she said:

> "*My father put his patent treadle in some stands already in existence. He took the brace out of those stands and put the new brace and new treadle in. . . . He had all sorts of second-hand machines on hand. You could take the legs of almost any machine; it would not make any difference what sewing machines the legs belonged to, it did not affect the brace and treadle.*" (Rec., p. 157.)

Here, then, we say has existed a vast market for the last seventeen years for Mr. Cramer's alleged invention. It will be recollected that Cramer does not manufacture sewing machines, and never did, nor did he even manufacture the braces or treadles. All that he ever manufactured (not to exceed forty in number) has been a vertical double brace with the treadle hung in peculiar loop-holes in its lower depending ends, and capable of being substituted for the other vertical braces of all other sewing-machine manufacturers in this market. Here, then, we say, was a vast market furnished this plaintiff Cramer for a

period of seventeen years for his alleged invention. All that he would have to do to have made a fortune "beyond the dreams of avarice" would have been to have carried around by the wagon loads his vertical double-brace and treadle and substitute it in the machines of the other manufacturers for their double brace without such treadle connections. Even at a profit of a dollar a machine the aggregate sum received by Cramer, and with a suitable corps of assistants, would have been so vast as to preclude the possibility of its non-occurrence, if it were possible. We respectfully submit, therefore, that the conclusion is irresistible that this alleged invention of Cramer not only never added a dollar to the value of any machine in which it was placed, *but that as a matter of fact it was such a damage and detriment to any machine wherein it was placed that Cramer was never allowed to substitute his alleged invention in any machine owned by any third party, and not purchased by him and sold by him.*

The testimony is clear and uncontradicted to the end and effect that prior to the year 1887 every sewing machine sold by the leading companies and manufacturers of sewing machines in the Northern District of California, the Singer Company included, hung their treadles independently of the cross-brace of the sewing machine, and that if there was any necessity or demand for a sewing-machine treadle hung in the lower ends of a vertical cross-brace of a sewing machine, such necessity and demand was present in the thousands of sewing machines then in use in the Northern District of California. The testimony is also clear and uncontradicted, as above partially indicated, to the effect that since the year 1886, and down to the present time, all of the leading sewing-machine manufacturers of the United States sold their sewing machines by the thousands in the Northern District of Cali-

fornia, and all of such machines had their treadles hung independently of the vertical cross-brace. The plaintiff Cramer himself so testified, as follows:

"Q. Mr. Cramer, what sewing machines, if any, were in sale in Sonora, in competition with the Singer Company's machines, in 1885, and from that time forward until the present time?

"A. The American, the Wheeler & Wilson, the White—. . . .

"Q. Did any of those machines have the treadle hung in the cross brace, other than the Singer Company's machines?

"A. *The cross-brace containing my patent was only sold by me and the Singer Company, that I know of.* Does that answer your question?

"Q. In any of these other machines that you have mentioned, was the treadle hung in a vertical cross-brace, or not?

"A. No, sir. (Rec., p. 83.)

"Q. How many different manufacturers had machines on the market here in San Francisco for sale from 1885 up to the present time, in competition with the Singer Manufacturing Company?

"A. I don't know how many different kinds, but I could name you quite a number.

"Q. Please do so.

"A. The Domestic, the Wheeler & Wilson, the Howe, I think Crown was here, too, but I am not certain of that, and I think Standard was here, and the Florence I think has gone out of date. I don't know as they were manufactured and sold during those times — and the Wheeler & Wilson, and the White—I think the White had an office here. I am quite positive of all of those machines, if they were holding offices here at that time, and to the best of my knowledge they were.

"Q. In how many of those different machines, if any, was the treadle hung in the vertical cross-brace?

"A. In the vertical brace? Without going over how many I mentioned, the Domestic didn't have it

> hung that way, the White didn't have it hung that way, the Wheeler & Wilson didn't have it hung that way. The Howe didn't have it hung that way; the Florence, whatever there was of them, didn't have it hung that way. *It is the Diehl that had it hung that way.* (Rec., p. 84.)

It should be remembered in this particular connection that the Singer Company is not like Cramer alleges himself to be, manufacturing cross-braces with treadle connections to be utilized in all the different varieties of sewing machines. The Singer Company only manufactures a combined cross-brace and cross-bar with the treadle hung in the cross-bar, and not in the cross-brace, for its own machines, and not for any others. Of course the only effect that such manufacture could have upon the market, if the plaintiff Cramer's contention is correct, would be to make a demand for this same device in all of the other machines of the various manufacturers; and equally, of course, the Singer Company not being in a position to supply this demand, left the whole field open to Cramer to introduce his patent treadle in all of the other sewing machines.

We call the attention of the court, also, to the fact that since the year 1887 the acts of the Singer Company, as shown by the Diehl brace, have not damaged Cramer in any respect, because it is perfectly evident that any party desiring and intending to purchase a Singer machine would not have been diverted from that purpose by any kind of a brace appearing in any other kind of a sewing machine. There is not the slightest contention in this record that the Singer Company ever sold its sewing machines by reason of its brace. There is not the slightest proof in this record that any party ever intending to purchase an American sewing machine with Cramer's treadle and brace therein ever changed his mind and purchased a

Singer machine on account of the Diehl brace, or for any other reason whatever. *Indeed, if there was any advantage in the Singer sewing machine to the user by reason of the presence therein of the Diehl brace, such presence in the Singer machine of the Diehl brace, according to Cramer's theory, would have simply pointed out and illustrated practically to the users, the value of such a brace, and would have been the strongest argument that Cramer could have had to persuade the users of all other types of machines to permit him to take out the braces in those machines and substitute his combined brace and treadle therefor.*

We respectfully submit that in view of these facts upon this phase of the proposition alone, Cramer's contention that he has been injured in his "business" by any act of the Singer Company complained of is simply bald nonsense.

The testimony of Cramer shows conclusively that there was no connection whatever with the placing of the few treadles of his manufacture in sewing machines between the years 1881 and 1885 and the price at which he sold such machines, and from his own testimony it is made certain that the presence of the treadle had nothing to do with the price he received for the machines.

It needs but a cursory reading of the deposition of Cramer to show that the facts are simply these: That he was a dealer in new and second-hand sewing machines in a small way; that he purchased the new machines only of the American Sewing Machine Company, and that he bought the second-hand machines irrespective of their manufacture, and at whatever price he could purchase

them for, and as we shall see from his own quoted testimony, he put the device of his patent in these machines indiscriminately, new and second hand; *and it appears equally clear from his testimony that the widely varying prices at which he bought and sold these machines precluded the possibility of the presence of his device therein having anything to do with the price received.* Cramer's testimony upon this point is clear and emphatic, as follows:

> "Q. What did you pay for these American machines?
>
> "A. All the way, according to the amount I bought at one time, and the different styles of machines. I bought American machines—I also bought some second hand ones, for which I did not pay more than $5, and from $5 to $40.
>
> "Q. What would you sell a machine for that you paid $5 for?
>
> "A. The machine that I bought at $5 was a second hand machine. That I repainted and refitted it up, done perhaps $10 or $15 worth of work on it—I could not tell you exactly the amount, and I sold it for $45 or $50, just as I had the chance, and just as the customer happened to want it, on time or cash. The machines that I paid $40 for were new machines. I sold them for $90, and $95, and $100. I should say I don't remember now the exact price, but I think that is it, $95 or $100.
>
> "Q. I understood you to say that you sold those machines that you paid $40 for, for $90 or $95?
>
> "A. Yes, sir." (Rec., p. 193.)

The testimony shows, also, that Cramer put his thirty-five treadles largely in second-hand sewing machines, as follows:

> "A. I sold the American as a specialty, and *I traded in second-hand sewing machines;* most sewing machine men do that. *Those I fixed up and put on patent treadles and sold them*—I put on patent treadles on some of them. *In that way I sold most*

every kind of machine in the market, that is, in trading them and refitting them, *those that were good machines and worth being refitted, I fitted them up and sold them at some price."*

Let us see, now, whether we are correct in our statement that as a matter of fact the presence of Cramer's patented device in the few machines in which he put such devices had anything to do with the price at which he sold the machines. The first question and answer that throws any light upon this question is upon the direct examination of Mr. Cramer, where he was asked by Mr. Miller as follows (Rec., pp. 41-2):

"MR. MILLER: Q. Mr. Cramer, after you got up your invention, what did you do with regard to putting it into use and selling machines containing the same?

"A. I had them manufactured, put them into machines, and *I have sold the machines for five dollars more than I would,* an advance of five dollars on the patent treadle.

"Q. When did you first commence selling the machine with the invention in it?

"A. In 1881, the first one I had cast. That was cast, you know, at the foundry in say, January, 1881.

"Q. What foundry did you have the first one cast at?

"A. At Sonora.

"Q. In the foundry at Sonora?

"A. Yes, sir.

"Q. What did you do with that machine after you had it finished?

"A. I put the casting onto the machine shortly afterwards, or put it onto a second hand machine, and sold it for—*well, I sold that for a big price; I got $50 for it.*"

Also on page 44 the plaintiff Cramer was asked as follows:

"Now, Mr. Cramer, regarding the prices at which you sold your machines, did you get any addtional

price by reason of having your improvements on the machine, over the old machine?

"A. *I got $5 more; I charged $5 more.*" (Rec., p. 44.)

Objection was made to this testimony that was overruled by the court, and exceptions taken. (P. 44.)

Cramer testified further, as follows:

". . . *Some machines I sold at different prices from others I sold them all the way from $65 to $90, and several of them up to $100.*" (Rec., p. 44.)

"Q. What prices did you have to pay to the O. K. Foundry for casting those parts?

"A. They cost me a dollar and a half, all told; that is, the castings and the painting all together, cost me $1.50."

The Sonora brace cost him $5.50. (Rec., p. 82.)

Several facts appear to be made certain by this testimony, as follows: *First*, that Cramer bought his second-hand machines all the way from $5 to $40 and sold them for $45 to $50, just as he had the chance and the customer happened to want them, on time or cash; *second*, that he bought his new American machines for $40 and sold them for $90 to $100; *third*, that although he sold from ten to eighteen machines a month between the years 1881 and 1885, still he only put in thirty-five treadles and braces in such machines, second-hand and new; *fourth*, that even at this day, nearly twenty years afterwards, he would only swear as to the presence of his brace and treadle in those machines in the following indefinite language: "I have sold the machines for $5 more than I would. . . . I got $5 more; I charged $5 more." All testimony as to the price of machines, new and second-hand, with these thirty-five treadles and braces in them, and as to the sales of such machines, is confined entirely to the plaintiff Cramer, his son and daughter. As before stated, no witness

has been called, either purchaser or user, who ever purchased or used one of those machines who would swear that he even knew that such a brace and treadle was in the machine. No witness has been called, either purchaser or user, who would swear that he ever purchased or used either a new or second-hand machine with Cramer's patented brace and treadle in it of any description, and of course there is no testimony, outside of the Cramer family, that any purchaser or user ever paid a dollar more for a machine by reason of the presence of the patented treadle. The facts would seem to be, even as testified to by Cramer, that while he might have charged something more for a few second-hand machines in which he put his patented treadle, *the customer never knew of this fact*, and the wide range of prices at which he bought and sold machines, in which he says he put his thirty-five treadles, makes it simply impossible for him to testify with any truth or certainty that the presence of the treadle had anything to do with the price the purchaser paid for the machine. The facts probably are that he put this patented treadle, whatever the number was (he says thirty-five), only in second-hand machines that he sold there over a period of, he says five years; those which he bought at $5 and sold at $45, repainting and fixing them up; and that the purchaser of that kind of a machine did not either know, or care, what kind of a treadle there was in it.

We respectfully submit that all this testimony shows that if Cramer ever sold a sewing machine in which he put the combined brace and treadle, he sold it, *not because of the presence of the treadle in the machine, but in spite of this fact.*

Indisputably and admittedly, each of the thirty-five or forty machines sold by Cramer with his brace and treadle between the years 1881 and 1885 contained the devices of the second claim of his patent, and there is simply no testimony showing the value of the mechanism of this claim, or that any one of the thirty-five or forty sewing machines would have been sold without the presence of the devices of the second claim; all record evidence is clearly that Cramer's devices without this second claim are without value.

Cramer tries to get away from the abnormal and grotesque effect of his entire device as shown in detail in his second claim, by describing a somewhat different form of confining devices that he used in the thirty-five treadles and braces actually manufactured by him, to prevent the treadle from bouncing and thumping endwise when the treadle is in motion. In actual construction he testified that he prevented the bouncing and thumping of the trunnions endwise when the treadle was in motion by plugs of wood cut from a broom-stick (Rec., p. 105). The exhibit put in evidence by Cramer as to the braces that he actually had cast shows the lower end of the brace cast with an enlargement or bulb in which the hole was placed, carrying the ends of the trunnions, and this hole afterwards stopped by a cushioned plug of wood. The ends of these trunnions he says were also beveled on the top. This change, however, did not alter the fact that in all of those treadles appeared in substance the devices of the second claim of the patent, and for the precise purposes set forth in the patent.

We thus see, under the testimony that none of the

thirty-five machines sold by Cramer between the years 1881 and 1885, having the combined brace and treadle of his patent, were sold without substantially the special mechanisms, construction and arrangement of his second claim. So far as all testimony in this record shows, if any person purchased one of the thirty-five machines with Cramer's patent in it, the mechanism of the second claim was as essential as the mechanism of the first claim, in such machine. To be sure, Cramer attempts in his testimony to belittle and minimize in every way the invention of his patent, as shown by his second claim, but unquestionably it is out of Cramer's power twenty years after to contradict and negate the standing of that claim, and its effect and value upon any practical utility that may possibly exist in the peculiarly organized structure, as shown in his patent. It needs simply to look at figures 1 and 2 of his drawings, and especially figure 2, to show that if the block with its projecting tangs and its leather padding were removed from the Cramer device, there would remain a perfectly commercially worthless and inoperative structure having all the vices and defects which Cramer says even at this day his patent and invention was intended to remove. Cramer distinctly says through almost a fourth of his patent, in describing his structure, that the particular devices of the block and leather alliance of his second claim were there

> *" to cover the top and end of each trunnion, to serve as cushions to keep the same close in its bearings, to prevent the noise which would result were the trunnions permitted to bounce and thump endwise when the treadle is in motion. . . . The same leather also interposes between the end of the trunnion and the adjacent iron. . . . By this construction my treadle bearings are rigidly fixed and*

in no wise liable to get out of line or to require adjustment. The usual noise is prevented," etc.

Cramer states all of these facts affirmatively in his patent, and negatively to the effect that if the mechanical construction of the second claim was not present, his "trunnions would bounce and thump endwise; they would not be rigidly fixed, and they would get out of alignment and require adjustment, all accompanied with the usual noise." It is perfectly evident, simply from looking at figures 1 and 2 of Cramer's drawings, and especially figure 2, that if the block and leather padding and re-enforcing effect were removed, and the treadle put in motion, it would be unconfined in any direction; that it would simply bounce and thrash around in an unconfined opening; that the "end of the trunnion" would strike against the "adjacent iron." There would be nothing to prevent the trunnions and treadle from both lateral and vertical movement, and the only effect of the pear-shaped opening in which the trunnions are dropped, would be to cause the trunnions to slide down into the bottom of the opening when they are bounced out of place. The only condition that would govern the movements of the trunnions would be the length of throw of the pitman rod.

Joseph W. Lawler, one of the principal witnesses for the plaintiff Cramer, thus described the practical effect of an unsecured treadle as to the action of the pitman upon it:

> "Q. Do you believe that a treadle would be secured in a machine so as to make it a practical, good working machine if the treadle was left entirely free to jump just as high as the pitman rod was a mind to pull it?
>
> "A. I don't think it would. . . . O, no, not now-a-days. I would not think it was a practical treadle." (Rec., 188-9.)

Undoubtedly this witness told the truth as to this matter, and undoubtedly Cramer knew this to be the truth when he applied for and took out the patent in suit, and the existence of such fact as representing the truth, is the reason of the existence of his patent and of the peculiar and special devices exhibited in his patent to prevent these effects and results, and particularized in his second claim.

THE APPLIED LAW TO THE FACTS AS ABOVE ADMITTED OR PROVEN IN THIS RECORD—CLASSIFIED.

Point 1.

There being no proof of any kind or character in the record that the Singer Company has ever made any profit or profits by reason of its asserted employment of Cramer's patent, and the absence of such proof bars any consideration of the question of profit, or any argument or discussion upon this point.

We call the attention of the court to the fact that there is no proof whatever in this record that the Singer Company has ever made any profit by the use of the devices complained of as an infringement; and that there being no evidence in the case to justify a verdict upon the theory that the profits made by the Singer Company as to these devices are the measure of the damages, Cramer cannot invoke the rule of law laid down by Mr. Justice Strong in the case of *Mowry* v. *Whitney*, 14 Wall., 620, and reaffirmed in the *Root* v. *Railway* case, 105 U. S., 198, viz., that—

> "The profits which are recoverable against an infringer of a patent are in fact a compensation for the

injury the patentee has sustained from the invasion of his right. They are the measure of his damages. Though called profits, they are really damages, and unliquidated until the decree is made."

Even if the question of profits could enter into the question of the estimation of damages,

> "it is alone the profits that the infringer makes, or ought to make, which govern, and not the profits which plaintiff can show that he might have made." *Burdell* v. *Denig et al.*, 92 U. S., 720.

Point 2.

This being an action at law, the only question that can arise as to damages is the question of the actual damage that Cramer has suffered, and, in the absence of proof of actual damage, nominal damage only can be given.

In the case of *Philp* v. *Nock*, 17 Wall., 462, this court, passing upon this question, says:

> "*The plaintiff must show his damages by evidence. They must not be left to conjecture by the jury. They must be proved, and not guessed at.*"

In the case of *Blake* v. *Robertson*, 94 U. S., 733, this court says, speaking upon the proof—the kind and extent—that must be present to assess actual damages, as follows:

> "No license fee charged by the complainant is shown. The burden of proof rests upon him. *Damages must be proved; they are not to be presumed.* The complainant made a profit of forty dollars an inch on the width of the jaws of the numerous machines he had sold.
>
> "*But inventions covered by other patents were embraced in those machines. It was not shown how much of the profit was due to those other patents, nor how much of it was manufacturer's profit.* The com-

plainant was, therefore, entitled only to nominal damages. This the court gave him. It was all the state of the evidence warranted. It would have been error to give more."

In the case of *Rude* v. *Westcott*, 130 U. S., 152, this How., 488, this court said:

> "Where the plaintiff is allowed to recover *only actual damages, he is bound to furnish evidence by which the jury may assess them. . . . He cannot call on a jury to guess out his case without evidence. Such damages must be calculated, not imagined,* and an arithmetical calculation cannot be made without *certain* data on which to make it."

The emphasis and italicization of this word "certain" is in the decision itself.

In the case of *Seymour* v. *McCormick*, 16 How., 485, this court says:

> "Actual damages should be actually proved, and cannot be assumed as a legal inference from the facts which afford no data by which they can be calculated."

In the case of *Keystone Mfg. Co.* v. *Adams*, 151 U. S., 149, this court says:

> "But as we have seen, the burden of proof was upon the plaintiff. He relied, notwithstanding defendant's objections, on incompetent and irrelevant evidence, and the decree in his favor, in so far as it awards more than nominal damages, cannot be sustained."

In the case of *Coupe* v. *Royer*, 155 U. S., 583, this court says:

> "Upon this state of facts, the evidence disclosing the existence of no license fee, no impairment of the plaintiff's market, in short, no damages of any kind, we think the court should have instructed the jury, if they found for the plaintiffs at all, to find nominal damages only."

In the case of *Rude* v. *Westcott*, 130 U. S., 167, this court speaking upon the question of proof as to damages, and the opinions and conclusions of witnesses in establishing damages, thus states the law as to these conditions:

> "The estimates of all the witnesses of the complainant were merely conjectural; that is, were made without having knowledge of any saving secured, either in the cost of the machine or in the labor required for its use, they simply stating that they considered that the amounts named by them would be a reasonable and fair royalty or license fee for the patented drill . . . no evidence of the value of the invention to the defendants was adduced except the conjectural estimates stated; and they furnished no satisfactory basis for any damages, much less data, which authorized the specific finding made as to the damages for each drill used. *Opinions not founded on knowledge were of no value. Conclusions from such opinions were at best mere guesses. By the decision rendered a settled rule of law was violated, that actual, not speculative, damages must be shown, and by clear and definite proof, to warrant a recovery for the infringement of a patent.* As was said long ago by this court: '*Actual damages must be calculated, not imagined; and an arithmetical calculation cannot be made without certain data on which to make it.*' . . . *New York* v. *Ransom*, 23 How., 487, 488. . . .
>
> "*No legal ground being shown for the recovery of specific damages for the alleged infringement of the patents, the decree must be reversed, and the cause remanded, with directions to enter a decree for the complainants for nominal damages.*"

In the case of *Boesch* v. *Graff*, 133 U. S., 705, this court speaking upon this question of actual damages, and the relation of the proof to the particular patented feature and the defendants' machines, thus restates and emphasizes the rule of law:

> "Where the patentee granted no licenses, and had

no established license fee, but supplied the demand himself, and was able to do so, an enforced reduction of price is a proper item of damages, if proven by satisfactory evidence. *Yale Lock Mfg. Co.* v. *Sargent*, 117 U. S., 536. *The damages must be actual damages*, but where the patented feature is the essential element of the machine or article, as in the case just cited, if such damages can be ascertained they may be awarded. *When, however, a plaintiff seeks to recover because he has been compelled to lower his prices to compete with an infringing defendant, he must show that his reduction in prices was due* SOLELY *to the acts of the defendant, or to what extent it was due to such acts. Cornely* v. *Marckwald*, 131 U. S., 159. *There must be some data by which the actual damages may be calculated. New York* v. *Ransom*, 23 How., 487; *Rude* v. *Westcott*, 130 U. S., 152."

The language of the court as to certain evidence introduced in that case to establish damages is so curiously applicable to the facts in this case that we quote therefrom:

> " Conceding that as Graff granted no licenses, and had no established license fee, but supplied the demand for the burner himself and was able to supply that demand, and that, therefore, if he was compelled to lower the price by the infringement he would recover for the loss thus sustained, *does the evidence satisfactorily establish that the reduction in prices was due solely to the acts of the defendants in infringing? The opinion of Mr. and Mrs. Graff to that effect is not sufficient."*

Paraphrasing the language of this court, and applying it to the facts of this case, the opinion of Mr. Cramer and his son is not sufficient. Cramer never manufactured or put into a sewing machine his brace, to exceed forty in number, during the whole period of five years, ending in the year 1885 at the latest. The Singer Company never received a machine complained of in California before April, 1886, and never sold one until 1887. Of course

there was and could not have been any "actual damage" to Cramer.

From the authority of the above cases, only actual damages can be recovered, and in all instances the burden of the proof is upon the plaintiff to show by evidence what that damage is so plainly that it can be computed.

This is but another application of the well-known principle of law that the complaining party must establish the *right,* as well as the *extent,* of his recovery by evidence in the case; and that a failure in establishing the right of recovery defeats him entirely, and a failure to show by the evidence the *extent* of that *right* of recovery will give him the right to *nominal damages only.*

Philp v. *Nock,* 17 Wall., 460.
New York, etc., v. *Ransom,* 23, How., 487.
Blake v. *Robertson,* 4 Otto, 728.

Point 3.

The two claims of the Cramer patent in suit represent distinct and separate improvements and asserted inventions, and each claim must be taken and considered as if appearing and expressed in a separate patent.

There is no contention in this case, and no evidence to prove infringement of the second claim of the Cramer patent, and in fact Cramer's counsel disclaimed upon the record during the trial any assertion of infringement of this second claim. The case stands, therefore, in the same aspect as if Cramer's declaration or complaint was founded and brought upon two separate and distinct patents of

Cramer, each containing one claim only. Robinson on Patents, par. 985, thus lays down the law as to the separate claims of each patent standing for and representing separate inventions with the same force and effect as if embodied in a separate patent as follows:

> "A patent which embraces several claims, whether for the same or different inventions, stands in this respect on the same ground as if each claim were embraced in a separate patent; and every claim is therefore open to all those defenses which do not relate solely to the patent as a whole."

A recognition of the rule of law as laid down by this court in

Parks v. *Booth*, 102 U. S., 96.
Bates v. *Coe*, 98 U. S., 31.

The second claim of Cramer's patent was originally included in this suit, but upon the trial he elected not to proceed upon it, and it is difficult, indeed, to see how he can recover on a patent containing a claim upon which he had elected not to proceed, there being no proof as to damages except as to an opinion of Cramer as to the price he put on forty machines containing the alleged invention of *both* claims of his patent.

Point 4.

The actual damage, and the proof relating to such actual damage, must relate, and be confined, to the improvement identified by Cramer's first claim, whatever it is.

The alleged infringement in this case relates, and relates solely, to one isolated improvement identified by the first claim. Cramer himself as patentee has distinctly identified and classified his invention as to what it relates,

so that there can be no possible mistake as to this matter, Cramer stating in his patent that

> *" My invention relates to improvements in the bearings of sewing machine treadles . . and to this end my invention consists in the construction and combination of parts hereinafter fully described and claimed."*

This being so, what rule of damages shall be found and established to determine the actual damage that Cramer is entitled to recover from the Singer Company, if any?

The courts have been too explicit in all of their decisions upon this point to leave any room for question or doubt in this or any like case upon this subject. Say the courts:

> " Where an inventor has invented only an *improvement* and there is a violation of his right under his patent to use that *improvement* in connection with the inventions of others, or in connection with a machine previously known and used, *his damages must be limited to the value of his improvement* in connection with the several elements of the machine. *This is a subject in regard to which it may be difficult to give definite proof, but the difficulty does not change the legal principle."*
>
> *Seymour* v. *McCormick*, 16 How., 485.

In the case of *Burdell* v. *Denig*, 2 Fish., 595, Mr. Justice Swayne, delivering the opinion of the court, says:

> " Now, no testimony was given to show what proportion that mechanism bore to the other portions of the machine, and the jury were left to grope in the dark to reach such conclusions as they in the absence of the light of any other evidence upon the subject might be able to attain. We suppose that, in that state of the case, the plaintiffs were entitled, at most, to nominal damages only. *It was incumbent upon them to have given specific evidence to the jury, or at least that upon which the jury would have been*

warranted in forming a conclusion as to the extent and value of their claim."

In the case of *Buerk* v. *Imhaeuser,* 14 Blatch., 21, a case which after it went to the Supreme Court of the United States was there affirmed, 101 U. S., 647, the court said at the circuit:

> "In cases where the patent is for a *distinct improvement,* separable from the rest of the article as in the case put by the plaintiff's counsel, of a wagon with a patent pole, the rule is admitted and settled. . . . The same principle is, I think, applicable to a case of this kind. The watch is open to the manufacture of every one; and it is common to both the plaintiff's patented article and to the infringing article of the defendants. The wrong which the case shows the plaintiff to have sustained is the use of his invention in the making by the defendants of the infringing watches. . . . For this the plaintiff is entitled to recover in damages. But this rule has been disregarded. . . . *The burthen, in this respect, was upon the plaintiff".*

In the case of *Philp* v. *Nock,* 17 Wall.. 460, speaking upon this precise point, the Supreme Court says:

> "The measure of the damages to be recovered against infringers prescribed by the act of 1836 as well as by the act of 1870, is the 'actual damages sustained by the plaintiff.' . . . *Where the infringement is confined to a part of the thing sold, the recovery must be limited accordingly.* It cannot be as if the entire thing were covered by the patent; or, where that is the case, as if the infringement were as large as the monopoly. The plaintiff must show his damages by evidence. They must not be left to conjecture by the jury. They must be proved, and not guessed at."

In the case of *Black* v. *Thorne,* 111 U. S., 124, the Supreme Court of the United States, speaking of a case in parallel alignment with this, says:

"It does not always follow that because a party *may have made an improvement in a machine and obtained a patent for it*, another using the improvement and infringing upon the patentee's rights *will be mulcted in more than nominal damages for the infringement. If other methods in common use produce the same results, with equal facility and cost, the use of the patented invention cannot add to the gains of the infringer, or impair the just rewards of the inventor.*"

In the case of *The Goulds Manufacturing Company* v. *John P. Cowing*, 12 Blatch., 251, the court, Hunt, Justice, says:

"The question is, what advantage did the defendant derive from using the complainant's invention, over what he had in using other processes then open to the public, and adequate to enable him to obtain an equally beneficial result. The fruits of that advantage are his profits. They are all the profits he derived from the existence of the Whitney invention. The burden of proof rests upon the complainants. The damages to the plaintiffs, or the profits to the defendants (they are the same thing), must be proved like the other points in the case. . . . It is not necessary to further examine the cases upon this point. The Supreme Court have decided it explicitly, and, if there are cases found to the contrary, they must be considered as overruled."

In the case of *Mowry* v. *Whitney*, 14 Wall., 649, the court says:

"Now, it is clear that Whitney is not entitled to receive more than the profits actually made in consequence of the use of his process in the manufacture of the 19,819 wheels. It is the additional advantage the defendant derived from the process—advantage beyond what he had without it—for which he must account. . . .

"*The question to be determined in this case is, what advantage did the defendant derive from using the complainant's invention over what he had in using other processes then open to the public and ad-*

> *equate to enable him to obtain an equally beneficial result.* . . . The profits which are recoverable against an infringer of a patent are in fact a compensation for the injury the patentee has sustained from the invasion of his right. They are the measure of his damages. Though called profits, they are really damages, and unliquidated until the decree is made."

In the case of *McCreary* v. *Pennsylvania Canal Co.*, 141 U. S., 463, the court says:

> "There is no doubt of the general principle that, in estimating the profits the defendant has made by the use of the plaintiff's device, where such device *is a mere improvement* upon what was known before, and was open to the defendant to use, the plaintiff is limited to such profits as have arisen from the use of the improvement over what the defendant might have made by the use of that or other devices without such improvements."

In the case of *Garretson* v. *Clark*, 111 U. S., 121, the court, Mr. Justice Field, says:

> "When a patent is for an improvement, and not for an entirely new machine or contrivance, the patentee must show in what particulars his improvement has added to the usefulness of the machine or contrivance. He must separate its results distinctly from those of the other parts, so that the benefits derived from it may be distinctly seen and appreciated. . . . The plaintiff complied with neither part of this rule. He produced no evidence to apportion the profits or damages between the improvement constituting the patented feature and the other features of the mop."

In this case the court adopts the language of Mr. Blatchford in the court below, reported in 15 Blatch., 70, as follows:

> "The patentee must in every case give evidence tending to separate or apportion the defendant's pro-

fits *and the patentee's damages between the patented features and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative."*

Point 5.

The value of Cramer's double brace device and treadle and the price asked by him for putting such double brace in a sewing machine in the years 1882-3-4 and 5, no measure of price or value of such device in the year 1895.

The testimony of Cramer shows, as we have seen, that he never sold or attempted to sell sewing machines with his treadle and brace therein after the year 1884-5. There is no proof in this record, as we have seen also, having any relation, even as claimed by him, to the value of his patented device, except as shown by his sales of thirty-five braces and treadles between the years 1881 and 1885. The assertion of damages as against the Singer Company is damages to Cramer, by acts committed by them in the years 1894 and 1895, or ten years after, admittedly, Cramer has never attempted to sell one of his patented devices. It would seem to be almost axiomatic that whatever value there was to Cramer's device in the years 1884 and 1885 was not the slightest guide or criterion to the value of such devices ten years later, or in the years 1894 and 1895. Even if this was a case to recover damages for an infringement of a patent under an established license fee, the most simple way of establishing damages where it is possible in any patent case, even in such a case, licenses ten years old would be of no value in establishing damages ten years later. In the case of *Adams* v. *The Bellaire Stamping Company*, 28 F. R., 360,

the late Justice Jackson, speaking upon this exact point, says, in instructing the jury in a patent case:

> "You as farmers or business men would not think of taking the price of a horse in 1866 and fixing that as the price in 1879. You would not be warranted in saying that in 1866 the price was the same as in 1879. . . . license fees for the use of that and another patent blended together would not establish a royalty as to either patent. . . . the burden is on the plaintiff to show you exactly what was paid as a royalty for that patent."

This case was afterwards affirmed by this court. 141 U. S., p. 542.

Point 6.

Rule of decision of this court as to the right and duty of a court to control the verdict of a jury and direct a proper finding upon the evidence submitted.

As we understand the decisions of this court, especially as applied to patent causes preliminary to the submission of any question of fact to the jury relating to letters patent of inventions, and questions of infringement, there is the question to be considered by the court as to whether or not there is sound and substantial evidence of asserted conditions and facts that should be submitted to the jury.

In the case of *Improvement Company* v. *Munson,* 14 Wall., 448, the court, speaking directly upon this point, says:

> "Nor are the judges any longer required to submit a question to a jury merely because some evidence has been introduced by the party having the burden of the proof, unless the evidence be of such a character that it would warrant the jury in finding a verdict in favor of that party. Formerly it was

> held that if there was what is called a scintilla of evidence in support of a case the judge was bound to leave it to the jury, but recent decisions of high authority have established a more reasonable rule, that in every case, before the evidence is left to the jury, there is a preliminary question for the judge, not whether there is literally no evidence, but whether there is any upon which a jury can properly proceed to find a verdict for the party producing it, upon whom the onus of proof is imposed."

In the case of *Bischoff* v. *Wethered*, 9 Wall., 814, relating to letters patent, the Court stated that

> "in such plain cases the court probably would feel authorized to set aside a verdict unsatisfactory to itself as against the weight of evidence. . . . The control which the courts can always exercise over unsatisfactory verdicts will enable them to prevent any wrong or injustice arising from the action of juries."

The rule is thus stated in the case of *Monclair* v. *Dana*, 107 U. S., 162-3, by Mr. Justice Harlan:

> "The rule frequently anounced that the jury may be controlled in their determination by a peremptory instruction if the testimony is of such a conclusive character as would compel the court, in the exercise of a sound legal discretion, to set aside a verdict if one were returned in opposition to such testimony. *Hendrick* v. *Lindsay*, 93 U. S., 143; *Phoenix Ins. Co.* v. *Doster*, 106 id., 36."

In the case of *Picasants* v. *Fant*, 22 Wall., 121, the court, speaking through Mr. Justice Miller (and speaking seemingly more freely for the rule than the language of the same great jurist in the case of *Tucker* v. *Spalding*, *supra*), says as follows:

> "It is the province of the court, either before or after the verdict to decide whether the plaintiff has given evidence sufficient to support or justify a verdict in his favor, not whether on all the evidence the preponderating weight is in his favor; that is the

business of the jury; but conceding to all the evidence offered, the greatest probative force which, according to the law of evidence it is fairly entitled to, is it sufficient to justify a verdict? If it is not, then it is the duty of the court after a verdict to set it aside and grant a new trial. Must the court go through the idle ceremony in such a case of submitting to the jury the testimony on which plaintiff relies, when it is clear to the judicial mind that if the jury should find a verdict in favor of plaintiff that verdict would be set aside and a new trial had? Such a proposition is absurd, and accordingly we hold the true principle to be, that if the court is satisfied that, conceding all the inferences which the jury could justifiably draw from the testimony, the evidence is sufficient to warrant a verdict for the plaintiff, the court should say so to the jury."

The case in this Court of *Railway Co.* v. *Rowley*, 155 U. S., 621, contains a general recognition of the duty of the Federal Courts in patent causes to peremptorily instruct the jury, even upon the question of novelty, where, in the opinion of the court, patentable novelty is not exhibited, in that case the jury having found a verdict for the plaintiff for damages, and the trial judge refusing to instruct the jury that the patent was void for want of patentable novelty.

The verdict of the jury in this case was $12,456 and costs. There is simply in this record not the slightest evidence of any description upon which such a verdict should be calculated. The only manner of accounting for the verdict is found in the fact that the number of machines sold by the Singer Company in the Northern District of California, as shown by their books in this case, was 12,456 machines; and the presumption is conclusive that the jury simply attempted to equalize the distribution of personal property by their own sweet will, and giving Cramer one dollar a machine.

This case, by the amended complaint, only covered the Northern District of California (Rec., p. 2); and by the petition for the writ filed herein, Cramer had other suits pending upon this same patent against this same machine as an infringement against the Singer Company, aggregating in amount more than a million of dollars.

The case in this court of the Conqueror, 166 U. S., 134, is a case where the large sum of $15,000 as demurrage was found as damages, and so testified to by a number of witnesses; in justification of such amount, this court said:

> "The amount of demurrage allowed, too, was so great as, if not to shock the conscience, at least to induce the belief that it must have been estimated by witnesses who were most friendly to the owner. . . . is putting a strain upon our credulity which we find ourselves quite unable to bear. . . . Without imputing to the witnesses, who were sworn in this case upon the subject of damages, any design to mislead the court, we are bound to say that their testimony falls far short of establishing such a case of loss of profits as entitles the libellant to recover this large sum, etc."

Commissioners v. *Clark*, 94 U. S., 278.

Railroad Company v. *Converse*, 139 U. S., 469.

We respectfully submit, therefore, that in view of all of the above facts, that there was not only not sufficient evidence to support or justify the jury verdict in this case, but that there was no evidence, and no statement of any witness that arises to the dignity and character of evidence, that can be found in this record to support the jury finding; and that under the uniform later decisions of this court laying down the rule as to such conditions, therefore nominal damages only could have been found and the case must be remanded with instructions to set aside the verdict, and order the granting of a new trial.

The defense by the Singer Company of its agent, Willis B. Fry, in the case of the same plaintiff, Herman V. Cramer vs. Willis B. Fry, formerly pending in the United States Circuit Court for the Northern District of California, with the same patent in suit, and against the same precise structure, the Diehl brace and treadle, as proceeded against in this case; and defended by the Singer Company, to the knowledge of Cramer's attorneys; and judgment being found for the Singer Company's agent Fry, upon the ground of non-infringement—res adjudicata as to the Singer Company, and an entire defense in this case, and so pleaded in this record. (Rec., pp. 222-23).

There is a further vital and controlling question presented by this record, and involved in this case unusual and different from those questions present in almost every patent litigation, and that is, that Cramer has had his day in court against the Singer Company in an action defended by that company upon the same precise subject matter here involved; that the judgment in that action was against him, and in favor of the Singer Company upon the single ground of non-infringement; and that the question there litigated and decided is *res adjudicata* in this action. The judgment roll showing these facts is found in this record upon pages 347 to 358 inclusive; and the opinion of Judge McKenna identifying these facts appearing in 68 Fed. Rep., pages 201 to 212 inclusive.

In the first trial of this case before his Honor Judge Beatty, as above indicated, his Honor recognized and sustained this plea of *res adjudicata* and directed a verdict for the Singer Company; and, as before indicated, this

case went to the Court of Appeals of the Ninth Circuit, 93 Fed. Rep., 736, and was there decided solely and entirely upon the question of *res adjudicata,* that court holding in substance that so far as that record disclosed, the defense of the Singer Company by its agent was a secret defense, was conducted by Fry and his attorneys, and that no such asserted relation of the Singer Company to Fry, was shown to be known to Cramer.

The following single quotation, from the decision of the court shows the entire question considered and disposed of in that case:

> "On referring to the evidence in the present case, it will be seen that it falls short of showing that the Singer Manufacturing Company had such relation to the defense in the case of *Cramer* v. *Manufacturing Co.* that it can plead the judgment in that case in bar of this action. So far as the evidence discloses the facts, the company's connection with the former litigation was secret. The company was not present in court, nor was its participation in the defense open and apparent. The defense was conducted by Fry and his attorneys. That the company defrayed the expenses of the defense, and paid the defendant's attorneys, is not shown to have been known to the plaintiff."

The decision of the Court of Appeals, as above quoted, seems to have been taken to mean by the trial judge, that the knowledge of the defense by the Singer Company of its agent Fry in the court below *must have been known to the plaintiff Cramer personally, and that knowledge to his counsel of such fact was not knowledge to him.* In accordance with this view of the law, and apparently the understanding of the trial judge as to the decision of Appeal Court, all testimony offered by the plaintiff in error to show that this knowledge was possessed by Mr. Cramer's attorneys and was known to the attorneys of

Cramer during and prior to the trial of the case of Cramer against Fry—was ruled out as incompetent; the evidence offered by the Singer Company to establish these facts, the exceptions to the rulings of the court striking the same out—exceptions 6, 7, 8. (Rec. 334, 346-347.) This, we respectfully submit, was plain and manifest error, the rule of law being well established that knowledge of the plaintiff's attorneys in matters relevant to litigations of which he has charge is knowledge to the plaintiff himself. Indeed, how could the principle or rule be otherwise? There is no class of litigation with which a lawyer is entrusted, where a plaintiff knows less about the manner of the conduct of litigation, the reasons and rules which govern it and the facts which are necessary to bring about a desired result in favor of or against a patent or a litigant, than this same patent litigation. As to all of these matters a patentee, plaintiff or defendant, knows simply what his counsel, supposed to be skilled in patent law and patent litigation, tells him, if anything. The bringing and conduct of a suit upon a patent is the act of a patent lawyer, and usually his client, either as plaintiff or defendant, implicitly follows and is governed by the instructions and advice given him by his counsel. No better illustration of this well-known fact can be found than in the relation and acts of Cramer to his own counsel and the Singer Company in this litigation, and as to the precise point now under discussion, as testified to by Cramer himself, as follows (Record, p. 385):

> "Q. *How came you, then, to join the Singer Company with Mr. Fry when you brought that suit?*
>
> "A *You must ask the attorneys about that, how that happened. I don't know how—he was in their office in the former trial of Cramer and the Singer Company, they were joined together, and I presume that the attorneys thought that it would do that time,*

too. That is what I imagine. I don't know anything about it. But I heard the attorneys talk that time—that they would take the two in together."

Mr. Cramer having previously testified that neither during the trial of the former case, nor afterwards, did he know, or was informed, or had any notice that the Singer Company was defending its agent Fry. (Record, 383.) It is a curious fact, however, that this witness, as frequently happened in his testimony, forgot himself, and, as disclosed by his answer upon page 385, above quoted, that he, when he was off his guard, still considered his first case as a case against the Singer Company instead of Fry.

So complete and dense was the ignorance of Cramer as to all matters relating to the conduct of his suit against Fry, that although he had made oath to the declaration or complaint in that case, and had therein sworn positively that Fry was the agent of the Singer Company (Record, p. 347), still when he was examined in this case as to this same precise matter, he denied all knowledge at any time of the fact of such agency. The following questions and answers to the same by Cramer upon page 385 show this fact:

"Q. Do you mean to say that you did not know when you brought that suit *that Mr. Fry was the agent of the Singer Company?*

"A. *When it comes to right knowing, where could I know; where is my authority for knowing?*

"Q. The question is did you know or not?

"A. *I did not know it."*

Again, so entirely opaque was the ignorance of this plaintiff as to all matters relating to the bringing and conduct of his former case against the Singer Company and its agent Fry, that he did not know that his attorneys had waived all damages at the former trial of the

suit against Fry until the case was over, and does not even now know when the attorneys did it, Cramer's exact language being: "But why the attorneys made that change I cannot tell, nor did I know it until the suit was over. I cannot tell you why the attorneys did that." (Record, p. 387.) We believe it is not customary for the defendant in any patent litigation, or the counsel for the defendant, to hold any communication with the plaintiff in such litigation. We know of no reason and can conceive of no occasion for so doing; all matters of every kind, name, nature and description relating to such litigation being conducted by the respective counsel for both parties litigant. We can conceive of no more flagrant and inexcusable breach of those well-settled rules of conduct in the control of patent litigations than for the counsel upon either side to communicate or attempt to communicate directly with the clients of the opposite party or give him notice of any matters whatever. If, therefore, Mr. Cramer's counsel knew, or had good reason to know, that the Singer Company was back of, and in fact was all there was to the defense in the case of Singer Company against Fry, such knowledge by Cramer's counsel was the knowledge of Cramer himself, and he was bound thereby. This was what he had "*heard the attorneys talk that time.*"

Antecedent and contemporaneous facts attending the preparation and trial of the Cramer-Fry case, prove conclusively and unerringly that Cramer's attorneys and counsel knew that the Singer Company was back of that litigation and represented all defenses therein.

We beg leave to call the attention of the court to the facts as disclosed by this record that, although Mr. Cra-

mer himself was prompt and swift to deny all personal knowledge of the fact being known to him that the Singer Company was back of the litigation against Fry, and indeed has denied personal knowledge to a great extent of the conduct by his attorneys of that case in his own interests, the curious and suggestive fact is apparent in this record that *none of Mr. Cramer's several attorneys and counsel attending and conducting the trial of his case against Fry have testified or indicated in any way that they, and each of them, did not have full knowledge that the Singer Company was back of that litigation and represented all the defenses.* If Cramer's attorneys, or any one of them, did not know that the Singer Company was back of the Cramer-Fry case, why did not they, or some one of them, simply appear upon the stand in this case and say so? The conclusion is obvious and irresistible that their failure to so testify is the best proof of their knowledge. Every act and movement of Cramer's several attorneys, from the filing of the declaration originally against the Singer Company and its agent Fry, to the entry of the verdict for the defendant Fry in that case, points as conclusively to the knowledge of the attorneys of the fact of the defense of that case against Fry as if their sworn testimony was here present to confirm such fact. Cramer's attorneys knew, as shown by the declaration as drawn by them, that Fry was a mere agent of the Singer Company, and of course upon a salary. They knew that Fry had personally not the slightest interest in the defense of that suit, except the interest that every employe has in subserving and advancing the business of his employer, and no salaried employee has ever been known to pay money out of his own pocket in so doing in a patent case. The attorneys for Cramer knew, and must have known, that no judgment or verdict for dam-

ages could be obtained against Fry as the selling agent of the Singer Company, and that no case can be found in the books where any such judgment has ever been rendered against an agent or employe of an infringer of a patent, and the fact that in the opening of the case before the jury, all question of damage against Fry was waived by Cramer's attorneys shows that they knew this.

Cramer's counsel knew, and must have known, that the several patent counsel, both east and west, who appeared and put in the defenses in the Cramer-Fry litigation, were not, and could not be, the personal counsel of Fry. Cramer's counsel must have known that the taking of the testimony in the east and the examination of one of the leading expert witnesses in patent causes in this country, Mr. Brevoort (Record, p. 218), and the introduction of the models and exhibits in connection with these depositions, was not and could not be the act of a salaried employe and agent, and must and could have been only the act of the Singer Company, it appearing by the deposition of Mr. Brevoort himself that he had been employed by the Singer Company. (Record, p. 218.)

Cramer's counsel knew, and must have known, that no responsible manufacturer ever abandons a salaried agent and employe sued for an infringement of a patent, where such act of infringement consists solely in the sale of the product of the manufacturer, and must have known that the Singer Company, with agencies in all parts of the United States, and its fifty years' reputation for high standing and character in all that relates to a manufacturer or its output, would have been the last party in the world who would so abandon an agent or employe. Cramer's attorneys, thus knowing that the Singer Company was back of its agent Fry in this litigation, must have continued such suit and gone through

the long trial that occurred thereafter for the sole purpose of asserting any favorable judgment rendered against the Singer Company upon the ground that that company was bound by the judgment because it was back of the defense; such judgment, if favorable to Cramer in that litigation, of necessity representing a finding that the Cramer patent was valid, and the machine of the Singer Company proceeded against an infringement thereof. The patentee, plaintiff and witness Cramer, all combined, unwittingly and accidentally, it must be believed, so far as he is concerned, confirmed and announced this fact in his testimony (Record, p. 386), where he says:

> "While I was prosecuting my suit against Fry *I was prosecuting him because of his selling Singer sewing machines alone.* I was aiming at Mr. Fry right there and then and nobody else. The Singer Company ruled themselves out. *When I got through with Mr. Fry I would go to New Jersey and sue the Singer Company,* and I would have done so had not a law been passed in 1897, which gave me the right to sue the Singer Company here again."

Of course the reason that he was going to New Jersey to sue the Singer Company "after I got through with Mr. Fry," was because he expected to contend that the judgment against Fry as an agent was *res adjudicata* against the Singer Company in a suit defended by them. Cramer's counsel undoubtedly knew also that for years the patent counsel, both East and West, representing Mr. Fry, agent of the Singer Company, were the counsel of the Singer Company, and had through a series of years defended that company constantly in the courts, both at the Circuit and in this court, in patent causes, as represented by the case of Brill against the Singer Company.

The dismissal of the suit of Cramer against The Singer Company and its agent Fry—as The Singer Company, "without prejudice"—a persuasive piece of evidence to the effect that Cramer's attorneys well knew that The Singer Company was all there was to the defense, and that they prosecuted the suit against Fry solely for that reason.

The fact that the suit against the Singer Company was dismissed "without prejudice" is an entire confirmation of the position that Cramer's attorney's prosecuted the suit against Fry solely because they knew the Singer Company was back of it, and that the suit was dismissed against the Singer Company "without prejudice" solely because they expected to enforce the doctrine of *res adjudicata* against that company, if successful, and if the suit had not been dismissed "without prejudice" they could not have attacked the Singer Company by reason of the absence of such condition in the dismissal. If the Singer Company had not been back of, and responsible for, the defense of its agent Fry, no judgment rendered against Fry could in any way have been binding upon that company, nor could that company in any way have been affected thereby; and it would have been perfectly useless for Cramer and his attorneys to have carried out the program admitted to have been formed, even to the plaintiff Cramer's knowledge, and expressed in his statement that *"when I got through with Mr. Fry I would go to New Jersey and sue the Singer Company."* Certain it is that this prosecuting of the suit against Fry would have been without any profit or advantage in the New Jersey Circuit if it had not been admitted, or made to appear, that the Singer Company was defending that litigation; and certain it is, also, that even so far as this rec-

ord shows, the facts of the defense of its agent Fry by the Singer Company were an open book to court, counsel and jury during the trial of the Cramer-Fry case, as shown in every line, movement and action of counsel for both parties during the preparation and trial of this case.

The trial court seems to have drawn an inference from the fact that the case had been dismissed "without prejudice," that this dismissal was an indication that the Singer Company was not back of the fight, and would not be bound by the defense. We respectfully submit that no such inference could, or ought, to be drawn. By the federal enactment, as then existing, the suit against the Singer Company was wrongfully brought; as the law then stood a corporation must be sued in the district whereof it was an inhabitant; and it was simply necessary to call the attention of the court, on the face of the pleadings, to the fact that this law had been violated, to secure the dismissal of the suit. As before stated, the dismissal of the suit did not change in the least the interests of the Singer Company in the result of the suit as to its agent. Under every principle of commercial honor and decency, it was bound to defend, and see through, its agent in a patent suit brought about solely by the act of such salaried agent or employe, in selling its machines. If, also, judgment was to be rendered for damages against its agent, the Singer Company would of course have to pay it, and would be interested in seeing that the amount of such damages was as small as possible. This being an action at law, it could well be, also, that the Singer Company was entirely willing to abide by the construction of the trial court to be given to the Cramer patent, with full confidence in any such submission as to the impossibility of its sewing machines being brought under any construction by the court given to the Cramer patent

as an infringement. Moreover, above and beyond all this, it is perfectly apparent that the Singer Company in the old Cramer-Fry litigation, while it might have been perfectly willing to abide by the decision of the trial court as to the construction of the patent and abide by the finding of the jury as to the question of infringement, still, the Singer Company would not for one instant propose to submit itself to the mercy of a jury of citizens of California, to determine any question relating to its manufacture of sewing machines, and the sum of money they should contribute to a patentee therefor; and we respectfully submit that the reckless action of the jury in this case (characterized by no stronger terms)—the total impossibility of even guessing as to any measure of asserted damages sustained—the certain proof in this record that as a matter of fact no damage was ever sustained by the plaintiff Cramer by any act of the Singer Company, and the further fact that if this jury verdict remains undisturbed, the property of the Singer Company will be subjected to spoliation to the extent of over two millions of dollars, governed only by the guessing capacity of respective juries in all parts of the country—are all ample reason for the willingness of the Singer Company to defend its agent as to any suit brought against him alone, and certainly ample reason and explanation of the refusal of the Singer Company to allow a suit brought unlawfully against it to stand—and to compel the plaintiff to begin suit in the district whereof the Singer Company was an inhabitant, to determine all these questions, and as the only rightful jurisdiction where such suit could then be brought.

No conflict of testimony in this record and case as to the fact that The Singer Company was back of the defense of its agent Fry, furnished all the counsel, and paid every dollar of the expense of every kind, name, nature and description of such defense.

The testimony is full, complete and uncontroverted that the Singer Company was practically the defendant in the case of the plaintiff Cramer against its agent Fry, and that the presence of Mr. Fry's name as a defendant in that litigation was a mere incident in its conduct.

Mr. F. J. Kierce, one of the attorneys for the Singer Company at the time of the suit of Cramer against Fry, testifies, itemized and in detail, as to this matter; his exact testimony being as follows (Record, p. 337, Vol. II):

> "A. The Singer Company paid all the fees in all the litigation of this case of *Cramer* v. *Fry*. All the charges for attorney's fees, costs, and everything, connected with this case, were made against the Singer Manufacturing Company and the Singer Manufacturing Company only. I know that of my own knowledge, because I presented the bills, I made the collections, and the blotter of the office of Wheaton, Kalloch & Kierce will show that the charges are made by me in the books.
>
> "Q. That applies to all the attorneys' fees in California, does it not?
>
> "A. All the fees that were paid out here.
>
> "Q. Do you know at whose expense the depositions were taken in the East?
>
> "A. They were paid for there. The only information that I have in connection with that is this: After the jury rendered its verdict in the case of *Cramer* v. *Fry*, I telegraphed to the East to get the items of cost from the commissioners who took the testimony. Telegrams were sent back in reply, and the costs were inserted in the cost bill, now on file.

They never were paid here, nor any charges entered in our books for them here, except in so far as the charges were entered for affidavits which were made in this city and county.

"Q. Did Mr. Fry ever pay a dollar of the expenses of that litigation, the case of *Cramer* v. *Fry?*

"A. Not one cent."

Mr. Fry, the agent of the Singer Company, and the nominal defendant in the former Cramer-Fry case, testified in this case as to the entire defense in that case by the Singer Company, as follows (Record, pp. 340-41):

"Q. Mr. Fry, as a matter of fact, who did make the defense in that case?

"A. The Singer Manufacturing Company paid all the expense of that litigation. You are referring now to the Cramer-Fry case?

"Q. Yes.

"A. They paid it; yes, sir.

"Q. Did you pay any of the expenses of that litigation yourself?

"A. No, sir.

"Q. What attorneys were employed in defending the suit here?

"A. Messrs. Wheaton, Kalloch & Kierce. The suit was originally brought against the Singer Manufacturing Company and myself.

"Q. What attorneys were employed by the Singer Manufacturing Company to defend the suit as to themselves?

"A. Messrs. Wheaton, Kalloch & Kierce here, and Mr. C. K. Offield in the east.

"Q. Was there any change made in the attorneys when the suit was dismissed as against the Singer Manufacturing Company?

"A. No, sir. The same attorneys were kept right along through the case.

"Q. Who employed Mr. C. K. Offield in the east?

"A. He was employed by the Singer Manufacturing Company. I wrote them when the case was dismissed as against themselves, or at the time, that

we should rely on their furnishing information both as to the facts and the law regarding it, and Mr. Offield was sent here by them and also took depositions in the east which were used in the case, and those were furnished by the company in the case against myself."

This testimony is not disputed or questioned by any witness, and stands unchallenged as representing the facts in this case as to this matter.

The rejected testimony showing, and tending to show, that the attorneys of Cramer knew that The Singer Company was back of its agent Fry in the litigation of Cramer against Fry, and were alone defending that suit, and that such suit was in intent and reality a suit against The Singer Company.

It is without dispute and contention in this record that Mr. Boone and Mr. Nouges were two of the principal attorneys for the plaintiff Cramer in the trial of the case of Cramer against Fry, as disclosed by the pleadings, and conducted the trial of that case. In addition to this fact being apparent from the record, and undisputed, it is so testified to by the witness Kierce. (Record, p. 336.) It would seem then, that any statement made by either of such attorneys as to their knowledge relating to the defense by the Singer Company of their agent Fry, and any action done by them to show and establish such knowledge, would be competent evidence in this case; such evidence, however, when offered, in every instance, being excepted to by Mr. Cramer's counsel and stricken out by the trial judge upon motion then made, and in each instance so excepted to by counsel for the Singer Company. During the progress of the trial of the case of Cramer

against Fry, and after the waiver by Cramer's counsel of all claims for damages in such case, Mr. Kierce had an interview and conversation with Mr. Boone at his office in this city that related to and covered the precise point in issue. (Record, p. 334.) The testimony of Mr. Kierce, and the action of the court thereon as to this matter, is as follows:

> "A. Mr. Boone said that in the case of *Cramer* v. *Fry*, he did not expect to make anything out of the defendant Fry, for the reason that he was the Singer Company's agent, but that he expected to recover a judgment in that action, that is, in the case of *Cramer* v. *Fry*, before the jury, and that he would make that judgment the basis of proceedings for the purpose of getting an injunction against the Singer Company. *At the same time and place he said that we ought to be well paid by the Singer Company for the services which we were rendering in that action in defending it.* Mr. Cramer was present at that conversation, it was said in his presence, and at the same time he suggested that we ought to be well paid for the services rendered in that case by the Singer Company. He did not participate in the other portion of the conversation to which I have just testified, except in so far as he heard it.
>
> "MR. MILLER: I move to strike out that answer upon the ground that it is wholly incompetent, irrelevant and immaterial.
>
> "THE COURT: The motion to strike out is granted.
>
> "MR. WHEATON: We will reserve an exception.
>
> "Exception sixth.
>
> "To which ruling of the court the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions for the court to sign and seal, and the court does hereby sign and seal the same.
>
> "MR. OFFIELD: Does your Honor strike out the part of the conversation alleged to have occurred that related to the Singer Company paying for the defense of the suit?
>
> "THE COURT: Yes. That was the conversation

of Mr. Boone. Mr. Boone said he hoped the Singer Company would pay them well."

The court, however, thereafter seemingly modifying its ruling only as to that portion of the answer of Mr. Kierce that related to the personal statement of Cramer. (Record, p. 335.)

It is contended in behalf of the Singer Company *that the case of Cramer against Fry was conducted exactly and precisely as if it was a case against the Singer Company alone; that it was so considered by the court and all counsel for attending parties present at the trial,* and that the testimony offered by the plaintiff in the case of Cramer against Fry was admitted by the court upon the theory and assumption alone that the case was in reality against the Singer Company, and that such testimony had no possible relevancy whatever if it had been, as now asserted, simply a case against Fry. If these contentions are correct, and the record in the case of Cramer against Fry should so disclose, there could be no more positive proof and determiation of the fact that the Singer Company *per se* and alone was defending that case. Yet the trial judge in the present case excluded all such testimony offered from the old record to establish this fact, under protest and objection made (Record, pp. 344-45-46) as follows:

"MR. KALLOCH: We also offer, from the same transcript, page 29 thereof, a letter, date Sonora, California, February 8, 1883, addressed to the Singer Manufacturing Company, by Mr. Cramer. That letter was marked in this case as 'Plaintiff's Exhibit H.' It is as follows:

" 'SONORA, CAL., February 8, 1883.

" 'THE SINGER MANUFACTURING COMPANY.

" '*Dear Sirs:* Having invented one of the most improved sewing machine treadles, I desire to call your attention to its merits, to make your machine

the most complete of any sewing machine in the market. I think you should embody my improvement in your machine. My patent treadle consists of a brace and treadle working in combination with each other, is frictionless as can be, noiseless, self-adjusting, always in line, most cheap, never needs adjusting, does away with cones and set-screws, and makes the machine run a great deal lighter. I desire to sell my patent right, reserving the right to put them on all machines I sell, or to have you put them on your machines and give me a royalty.

" 'Yours truly,

" 'HERMAN CRAMER,

" 'Sonora, Toulumne Co., Cal.'

"The record then proceeds: 'Marked Plaintiff's Exhibit C.' This is the reply: 'Office of the Singer Manufacturing Company, 34 Union Square, New York, February 20, 1883. Mr. Herman Cramer, Dear Sir: (Reads letter). (Marked Plaintiff's Exhibit 'D.')

"MR. MILLER: We object to that offer on the same ground.

"THE COURT: What is the relevancy of that? That is in evidence already in this case.

"MR. KALLOCH: The purpose is to show that the correspondence between Mr. Cramer and the Singer Manufacturing Company, which is pertinent in this case, was introduced with equal claim of pertinency in the case of *Cramer* v. *Fry*, and could have had no other bearing in that case than to fasten the infringement upon the Singer Company instead of Mr. Fry. It has no reference to the issue between Mr. Cramer and Mr. Fry.

"THE COURT: Would it be relevant to the issues that arose on the complaint and answer between the plaintiff, and Fry as agent?

"MR. KALLOCH: No, your Honor, because at the time, the recovery for damages for infringement was limited to two years prior to the commencement of the action, and that was dated many years before that. It would have no reference to the issues between Cramer and Fry, certainly if to the issues between any of the parties. It was after damages had

been waived, also, in the opening address by Mr. Boone.

"THE COURT: I would like to hold that matter in reserve. I have very serious doubts about the competency or relevancy of it. The whole proposition, as far as I can see at this moment, is presented by Mr. Boone's statement.

"MR. KALLOCH: Very well, your Honor. We will pass that and I will make another offer from the record from page 115. This is a question by counsel for the plaintiff.

"Q. What is this pamphlet I hand you?

"A. That is a Singer Manufacturing Company's directions for one of their styles of machines.

"Q. Do you sell that style of machine?

"A. We do sell very few of these.

"Q. You have sold some?

"A. There have been some sold; quite a number sold.

"Q. I refer to the machine represented on page 24 of that catalogue. State whether or not you have sold any machines of that kind, constructed in that way.

"A. Our office has handled and sold machines with that form of brace and treadle in.

"MR. BOONE: We offer this catalogue, the page particularly, in evidence.

"Q. I now hand you a copy of a patent issued to P. Diehl on the 14th day of October, 1884.

"THE COURT: Is there any objection to that page?

"MR. NOUGUES: Page 24, figure 26.

"MR. WHEATON: Yes, sir.

"THE COURT: What is the objection?

"MR. OFFIELD: It is only a part of a machine, and it does not show when it was done.

"MR. BOONE: I propose to follow it up.

"MR. WHEATON: They are offering the patent, which is much more correct.

"THE COURT: Do you withdraw this page?

"MR. NOUGUES: No, sir.

"THE COURT: The objection is overruled.

"MR. KIERCE: We except.

"MR. BOONE: I will read this.

"THE COURT: I was only admitting the diagram.

"MR. BOONE: We offer the whole paper.

"THE COURT: What is the objection of the reading matter?

"MR. NOUGUES: *It is descriptive of the machine they are selling, and which it is claimed is an infringement of this machine, and it sets forth the advantages that the company is claiming for that particular form of treadle.*

"MR. MILLER: We object to that upon the same grounds, if your Honor please.

"THE COURT: I will sustain the objection to that. You see, Mr. Kalloch, that is descriptive or is relative to the mechanism and as to whether or not it is an infringement.

"MR. KALLOCH: There is only one other point, and that I do not think will be denied, and that is that the machine alleged to be the infringing machine in that case is the same one that is alleged to be the infringing machine here. The infringing device in that case certainly was the Diehl stand, as we have it in this case.

"THE COURT: Is not that the infringing device in this case?

"MR. MILLER: Yes, your Honor, but I do not see how that cuts any figure in the present discussion.

"THE COURT: I will sustain the objection.

"Exception seventh.

"To which ruling of the Court the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the Court to sign and seal, and the Court does hereby sign and seal the same.

"MR. KALLOCH: What is your Honor's ruling as to the letters which were read?

"THE COURT: I will sustain the objection to them.

"Exception eighth.

"To which ruling of the Court the defendant, by its counsel, duly excepted, and hereby tenders this, its bill of exceptions, for the Court to sign and seal, and the Court does hereby sign and seal the same."

The trial judge, in his charge to the jury upon this precise point, charged that the defense of Fry by the Singer Company must not only be an open defense, but *must be "known to the plaintiff Cramer at the time of the trial of said case."* (Rec., p. 420.)

The rule of law, in effect, that an attorney has the exclusive authority in the general management of a suit and the free and full control of the case, and is under no obligations to consult his client, his acts and knowledge being of binding effect as to his client and the adverse party.

The relations that exist between attorney and client are the relations of principal and agent, and are governed by the same rules of law as the law of principal and agent, with the exception that in view of the subject-matter out of which such relation of attorney and client usually arises, a wider and more comprehensive scope and effect is given the relation of attorney and client than to the ordinary relations between principal and agent. Weeks on Attorneys at Law, Second Edition, page 441, par. 216, thus states the proposition:

> "The law of principal and agent is generally applicable to the relation of attorney and client. The client is bound according to the ordinary rules of agency by the acts of his attorney within the scope of the latter's authority."

Citing among other authorities:

Wharton on Agency, Sec. 580.
Russell v. *Lane*, 1 Barb., 519.
Sampson v. *Ohleyer*, 22 Cal., 200.
Fairbanks v. *Stanley*, 16 Me., 296.
Ware v. *Baird*, 12 Ind., 318.

In the case of *Nightingale* v. *Oregon Cent. Ry. Co., et al.*, 2 Saw., 338, the court, Judge Deady, passing upon the authority, of record counsel, in a case in the federal court, states as follows:

> "Sec. 35 of the Judiciary Act (1 Stat. 92) provides that in all the courts of the United States the parties may plead and manage their own cases personally, or by the assistance of such counsel or attorneys at law as by the rules of the said courts respectively shall be permitted to manage and conduct cases thereof. When in this court a party does not choose to manage his case personally, as permitted by this Section, he can only do so by an attorney thereof. He cannot appoint an agent not an attorney of this court and authorize such agent to represent him in the suit, but when a party makes his choice and selects an attorney of this court to conduct and manage his case, *the attorney stands in his place. Until such attorney is changed or discharged he has the exclusive control of the conduct and management of the suit.*"

There is a long line of authorities upon the proposition that an attorney has the full and free control of his client's case in all matters involving the ordinary conduct of the suit, and that he is under no obligations to consult his client.

Wharton on Agency, Sec. 585.
Commissioners v. *Younger*, 29 Cal., 147.
Pierce v. *Strickland*, 2 Story, 292.
Clark v. *Randall*, 9 Wis., 135.

As corollary to this proposition, and illustrative of its force and extent, is the rule of law that a client being bound by the acts of his attorney without collusion with an opposing party, he can have redress against his attorney in case of injury from these acts committed through gross ignorance or negligence.

Sampson v. *Obleyer*, 22 Cal., 200.

Foster v. *Wiley*, 27 Mich., 244.
Chambers v. *Hodges*, 23 Tex., 104.

Notice to the agent is notice to the principal; notice to the attorney is notice to the client, and this notice may be either actual or constructive.

The rule of law is also well established, we take it, both in the federal and state courts, to the effect that notice and knowledge to an agent is notice and knowledge to the principal. Mecham on Agency thus lays down the proposition, p. 547, Sec. 718:

> "It is a general rule settled by an unbroken current of authority that notice to an agent, while acting within the scope of his authority, and in reference to a matter over which his authority extends, is notice to the principal. . . . That the notice or knowledge which should be imputed to the principal is that only which relates to the subject-matter of that agent's authority, or, in other words, is that only which relates to the business or transaction in reference to which the agent is authorized to act by and for the principal."

The Supreme Court of the United States, in the "Distilled Spirits" case, 11 Wall., 367, speaking through Mr. Justice Bradley, thus clearly and concisely states this rule of law and the reason therefor:

> "The general rule that a principal is bound by the knowledge of his agent is based on the principle of law that it is the agent's duty to communicate to his principal the knowledge which he has respecting the subject-matter of negotiations, and the presumption that he will perform that duty."

Immaterial whether the notice or knowledge of the agent relating to the subject-matter of the agency is acquired during or before the agency.

There are certain exceptions to the above proposition to the effect that professional secrets relating to the subject-matter of the agency are not to be disclosed, nor used either for or against a principal by the agent, and to the further qualification that if the knowledge existed so long ago as to be naturally forgotten, the principal shall not be bound thereby, neither of which conditions apply to this case. Mechem on Agency, page 550, paragraph 721, thus states the rule under this aspect:

> "The law imputes to the principal and charges him with all notice or knowledge relating to the subject-matter of the agency which the agent acquires or obtains while acting as such agent and within the scope of his authority, *or which he may previously have acquired and which he then had in mind or which he had acquired so recently as to reasonably warrant the assumption that he still retained it.*"

In the case of *Lebanon Savings Bank* v. *Hollenbeck*, 29 Minn., 322, speaking upon this point, the court says:

> "Knowledge of an agent acquired previous to the agency, but appearing to be actually present in his mind during the agency, and while acting for his principal in the particular transaction or matter, will as respects such transaction or matter be deemed notice to his principal and will bind him as fully as if originally acquired by him."

Again, in the case of *Choteau* v. *Allen*, 70 Mo., 290, the court says:

> "Knowledge acquired not only during the continuance of the agency, but also that possessed by the agency so shortly before as necessarily to give rise to the inference that it will remain fixed in his

> memory when the employment begins, binds the principal."

The case of the "Distilled Spirits," 11 Wall., 367, *supra,* also clearly states this rule of law as here asserted; exceptions thereto, and the reasons therefor:

> "This rule does not depend in either case upon the fact that the agent *has* disclosed the knowledge or information to his principal; subject to the exceptions named, the law conclusively presumes that he has done so and charges the principal accordingly." (*The Distilled Spirits,* 11 Wall., 367.)
>
> Mechem on Agency, page 522, par. 722.
>
> *Dresser* v. *Norwood,* 17 C. B. (N. S.), 466.

We respectfully contend that in view of these authorities it was entirely immaterial whether the plaintiff Cramer himself had any knowledge whatever as to whether or not the Singer Company was back of the defense of his former suit against their agent, Fry; that as a matter of fact, and as a matter of intendment in the law, he was not expected to have any such knowledge; and we respectfully submit that the trial judge, in excluding all of the above testimony that showed, and tended to show, conclusively that the Singer Company was back of the Fry litigation, to the knowledge of plaintiff's attorneys, and indeed that the sole reason of the prosecution of its agent Fry by these attorneys was by reason of such knowledge, committed fatal error upon this vital point; and in overlooking the well-settled rule of law that if the attorneys knew of this fact and condition it was entirely immaterial whether their client knew it or not.

The testimony shows indisputably that a number of sewing machines were manufactured by George P. Bent with the treadle hung on point center screws passing through the lower ends of the cross-brace, at Chicago, in the years 1880 and 1881, and openly sold in the market, anticipating any alleged manufacture and sale of any one of the thirty-five treadles of Cramer; the manifest falsity of Cramer's attempt to carry back the date of his invention beyond this public use and sale of Bent.

Refused Instruction 13 is relied upon as the charge that ought to have been given by the court to the jury under the facts of this case, and the refusal to so instruct was manifest error.

> "Exception 13th. A witness false in one part of his testimony is to be distrusted in others."

The right of such an instruction, and the reason therefor, and the error of refusal is found upon the following facts and conditions undisputed in the record:

The record in this case is undisputed that in the winter of 1880 and 1881 Mr. George P. Bent, a manufacturer for a short time of sewing machines upon a small scale at the city of Chicago, Ill., through the advice of his foreman, Mr. Wm. H. Matchett, manufactured and put upon the market several hundred sewing machines with the treadle hung upon point-center screws that passed through the lower end of the cross-brace and locked and united such brace to the legs of the machine, and that such sewing machine was known to the market as the "Crown" Sewing Machine. Wood-cuts taken from the catalogue of Mr. Bent for the years 1881 and 1882 show this construction on page 231 of Record. There is no

dispute as to this fact. The machines themselves and the castings were all in evidence in the case, Mr. Bent testifying that the machines with these cross-braces "were put upon the market in the winter of the years of 1880 *and 1881*" *(Rec. 230)*, and reiterated this statement upon cross-examination. (Rec. 233.) Mrs. Susan Dilworth, a party using one of these machines with the treadle hung on point-center screws holding the brace to the stand continuously since February, 1882, so testified. (Rec. 236.)

Mr. William H. Matchett, manager for George P. Bent, and who got up this machine, testified as to these facts and to the manufacture of at least 100 of such braces and machines in the year 1881 (Rec. 240), and to the making of the patterns for these braces in the fall of 1880. (Rec. 241.) It is evident from Mr. Matchett's testimony that the transition from one of the old styles of brace of the Bent machine to the screw-pointed bolt having the double function of holding the brace to the legs of the stand and carrying the treadle upon its points, was easy and natural, as Mr. Matchett testifies that prior to 1880 the lower depending ends of the cross-brace in some of their stands "forked over the treadle rod." (Rec. 242.) An entire confirmation as to date of the manufacture and sale of these treadles is an advertisement in the "Sewing Machine Advance" of June 15, 1881, a paper of wide influence and wide circulation in the trade at that time. A cut of the first page of this publication appears on page 247, and a cut of the Bent machine, with its treadle hung on screw-point centers, on page 249. The editor of this paper, Mr. Walter Scates, was called and identified this publication and testified that he solicited the advertisement appearing therein prior to May, 1881. (Rec. 247.) It appears also that Mr. Bent pivoted his treadle in the

cross-bar in some of his machines instead of the cross-brace, for the reason that in many of his machines at that time the cross-brace did not extend below the middle of the stand. (Rec., bet. 230-31, shows this stand.) Matchett in his deposition testifies as to this fact. Without any opportunity of denial, we have seen that the treadle of the Singer stand is hung in an offset of the cross-bar by means of screw-pointed bolts fastened through holes in this offset and bar. Cramer attempted to escape the effect of these conditions in this case by trying to carry back the date of his invention prior to the fall of 1880, and attempted to do this by the only kind of testimony that he has introduced as to any of these matters, namely, that of himself, his son and daughter, the two latter being children at that time. Cramer testified that he first made his brace and treadle in a sewing machine in 1881. He says that he made the invention in June, 1880, and produces pieces of pasteboard with markings thereon, and so cut as to represent what he asserts to be a sewing-machine stand, also that he made his first machine with his patented brace in 1881. The testimony of Cramer as to this point appears on page 41 of the Record. His daughter, Mrs. Abbott, swears to the pasteboard models upon which appears the date of June 20, 1880. (Rec. 153.) There are three facts and conditions which negate the truth of this statement, and which strain the credulity of the human mind beyond the breaking point to believe it: *First*, nothing is more improbable than that Cramer, if he had made his invention in June, 1880, would have waited until the last of May, 1882, or within a few days of two years, before lodging his application for his patent in the Patent Office. As we have seen by the first application filed by Cramer, he undoubtedly wrote it himself and sent it to the Patent Office; and the

first thing that any man in Cramer's position does, who thinks he has an invention, is to get into the Patent Office with it immediately. Such a man is always afraid that some person else may get ahead of him, and that the Patent Office is the only safe refuge. For this reason, then, it is difficult to believe that if Cramer made any invention in 1880 he would have waited two years before filing his application in the Patent Office. *Second*, upon the trial of the case of Cramer against Fry, wherein the testimony as to the old Bent machine was there present and read, Cramer, who was then upon the stand and examined particularly upon this point, with every opportunity given him to so testify, never said a word about this story of the paper models and drawings of June 20, 1880, and the 1881 machine, but upon the contrary swore positively that the first casting for his brace was made about the month of February, 1882. (Rec. 257.) It took two or three pages of questions and answers, as shown in the record of the old Cramer-Fry litigation, to pin Cramer down as to when he first cast and put his first combination of brace and treadle in a sewing machine, but he finally, in answer to a direct question put to him by Judge McKenna, swore positively that it was in the year 1882. (Rec. 259.) This is Cramer's testimony in 1893, when he was seven years nearer the event than his present testimony. *Third*, Cramer, when he filed his first application in the Patent Office, there stated his invention as follows: "My invention consists in having the ends of the treadle-bar V-shaped to fit in a hole, brace C, also (heart)-shaped to receive the ends of the treadle-bar"—was rejected solely by reference to the Gregory patent of April 18, 1882, and to the Donovan patent of June 28, 1881. These patents are in evidence in this case. (Rec. 208-212.) The Donovan patent was ap-

plied for May 24, 1881, and the Gregory patent November 10, 1881. Nothing is more certain than that after Cramer's application got into the hands of Munn & Company, those parties would have taken the easiest way out of these rejections and references by simply having Mr. Cramer swear his date of invention back of them, and thus secure the grant of the patent. The fact that Cramer could not at that time carry his invention back of the dates of these patents upon which his application was rejected demonstrates conclusively that he did not make the supposed invention at the date he now testifies to, nor until a date after the date of the granting of these patents upon which he was rejected.

The late George Eliot defined a lie to be "an intellectual effort to meet an emergency." It is perfectly evident that Cramer's counsel in the first trial did not think the Crown machine had, as a matter of fact, the treadle hung in the lower depending ends of the cross-brace, as the Crown machine is simply the old Singer stand with the bolts carrying the treadle made long enough to bolt the lower ends of the brace to the machine. Even in this case, Cramer does not contend that in the Crown machine the treadle is hung in the vertical cross-brace, as shown by the following question and answer (Rec., p. 94):

> "Q. And in this Crown machine the treadle is not hung in the vertical cross-brace, is it?
> "A. In the vertical upright cross-brace? No, sir."

Yet the fear of the effect of this Crown machine upon his patent at the time of hearing the last case is shown by the following question and answer (Rec., p. 94):

> "Q. And still you say that you would claim that this was an infringement of your patent?
> "A. I do, sir.

"Q. Simply because it is a perfect alignment?
"A. Yes, sir."

Nothing can be plainer than that Cramer and his associates thought it necessary in this last trial to escape the effect of the Crown machine by carrying back the date of his patent by supposed old sketches. The whole performance is so strained and unnatural that it seems impossible to believe that it is not apocryphal, and that it is simply an intellectual effort upon the part of Cramer and his allies to meet a supposed emergency in this case.

As to this class of testimony this court has frequently commented, as in the case of *Clark Thread Co.* v. *Willimantic Linen Co.*, p. 481; the court says:

> "The only evidence on the question as to the time of Conant's invention is his own testimony, a species of evidence which, in cases of this kind, ought to be received with great caution. . . . No person accustomed to weigh the credibility of human testimony can fail to perceive the stress under which this evidence was given. . . . We feel bound to put this strict construction upon the patentee's evidence because such testimony, given for the purpose that this was, is necessarily subject to the gravest suspicion, however honest and well-intentioned the witness may be."

For these reasons, therefore, we respectfully submit that the said instruction 13 requested as above should have been given.

This case without a semblance of justification or palliation, for its commencement, or prosecution.

May it please the court, the more than fifty years open handed and fair dealing in the manufacture and sale of sewing machines by the Singer Company in this, and in all civilized countries of the commercial world, would

seem to render any affirmative statement upon their part to the effect that they had intended no wrong or injury to the patentee Cramer, or any inventor, humble or powerful, in the conduct of their business, needless; and that if they believed they had even unwittingly, whether the technical legal right existed or not, injured any inventor, they would have made honorable recognition and recompense therefor. That the Singer Company believe that the bringing of this suit is without palliation or justification, and the claim made by virtue of the Cramer patent, without right or equity, is manifest by the ten years' contest they have made in the resistance of this demand. It needs no eye of the seer, or ken of the wise, to read between the lines of this litigation, and so reading, see in the background, lying in ambush, the fact that speculators and adventurers are the real plaintiffs in this case, and are the real parties who planned and have carried out this attack upon the assets of the Singer Company; and that Cramer himself is but a mask, and would never have risked a dollar of money on any assertion in the courts of his patent against the company, or any other party.

Indeed, the record does show that many years before the bringing of this suit, Cramer was hunting for lawyers who would take his case against the Singer Company upon this patent with a contingent fee on contract relations for its conduct. (Rec., p. 60.)

The record shows also that in the year 1890 the plaintiff Cramer was hunting for, and attempted to make an arrangement with patent lawyers of San Francisco to take his case against the Singer Company upon his patent, upon a contingency, and was refused. (Rec., p. 382.) This attorney denying upon the stand in this case Cramer's statement to the jury that he had ever told

Cramer that the Singer Company's machine infringed his patent. This attorney, Mr. Wheaton, testifying that he told Cramer when he showed him his machine and patent that "he did not see anything in it that he thought would justify anything in the shape of litigation." (Rec., p. 381.)

It appears in this record also that Cramer in the year 1883, February 8th, wrote the Singer Company in general terms concerning his supposed invention, and offered to sell his patent (Rec., p. 46); that upon the 20th of the same month the Singer Company courteously replied thereto, stating that they received copies of all sewing-machine patents as they issue, and that after an examination of his, if they found anything of value in it that they cared to adopt, they would communicate with him further. (Rec., p. 47.)

Cramer says further, also, that upon September 25th, 1885, Cramer sent the Singer Company a letter in substance that he would like to sell his patent to them, and that the Diehl patent was an infringement of his, and received no reply thereto. (Rec., p. 49.)

These letters are without any import or importance, however, when we find that Cramer wrote every sewing-machine manufacturer of importance in the United States and attempted to sell them his patent, or receive some kind of an offer from them for the same, with the result as shown by the following quotations from his testimony:

> "Q. With how many of these different manufacturers of sewing machines did you try to make a deal for your patent?
>
> "A. *I think I wrote to all of them. So far as I remember now, it was to all of them.*" (Rec., p. 86.)

The result of this attempt to sell his patent, or obtain some recognition of it from all of the sewing-machine manufacturers of the United States is shown by the following question and answer (Rec., p. 87):

> "Q. Did you succeed in getting an offer for any kind of a deal for your patent, or for your invention, from any of these companies?
> "A. *No, sir. I did not.*"

When we remember in this connection that no sewing machine of any importance or standing in the United States has ever had hung the treadle in any way in the lower depending ends of the vertical cross-brace; when we remember that although the claim of Cramer is confined to a sewing machine, and his specification so amended as to strike out all other classes of machinery, and that there is not a line of testimony in this case that any other class of machinery, either directly or indirectly, has had hung its operative treadle in the vertical cross-brace—and when we remember that although this patent has expired several years, no sewing-machine manufacturer has changed its means or method of hanging their respective treadles, nor has any one of them hung the same in, or in connection with, the vertical cross-brace—and when we remember that the whole body of the testimony of practical witnesses in this case is that such hanging is without any utility or improvement over old methods, we can rightfully affirm that we think, for all these reasons, that this case is without a semblance of justification or palliation for its commencement or prosecution, and in no matter or thing, as a question of mechanics or of ethics, has the Singer Company done aught towards Cramer of which he has the slightest ground for complaint.

Conclusion.

In conclusion, your Honors, we most respectfully, hopefully, and confidently submit that from any possible view or standpoint that can be taken in a review of the law and facts in this case, as above presented, that it is clear that the affirmed judgment by the Circuit Court of Appeals, now the judgment of the court below, should be reversed, and the case remanded to said Circuit Court, with instructions to set aside the verdict, and dismiss the suit.

Respectfully submitted,

CHARLES K. OFFIELD.

CHARLES C. LINTHICUM.

Supreme Court of the United States.

OCTOBER TERM, A. D. 1902.

No. 215.

SINGER MANUFACTURING COMPANY,
Petitioner,

vs.

HERMAN CRAMER,
Respondent.

PETITIONER'S REPLY TO ADDENDA BRIEF.

We have just received the Addenda Brief from the counsel of the respondent Cramer, and as we understand the indulgence of the court, we are permitted to reply thereto.

I.

Following the order of presentation of supposed points of respondent's Addenda Brief, we respectfully submit that such presentation wholly weakens, and in no manner strengthens, the filed brief of the respondent.

(1.) The first claim of the Diehl patent has for its first and principal element the "vertical double brace joining the two legs of a sewing machine, provided with holes," etc. It is the usual vertical double brace that constitutes this element, with certain holes, and not the old common cross-bar. When Diehl cast as a unit struc-

ture the "old usual vertical brace" and the "old common cross-bar" he of course produced a structure which was in itself as an entirety a *brace;* and his patent in the fifth claim distinctly states and provides and claims that he mounts his treadle in that cross-bar, and this cross-bar forms the base of the concrete brace. Respondent's counsel seems to derive much satisfaction, on page 2 of his Addenda Brief, from the fact that the Singer catalogue states that the treadle is "entirely supported within the brace." Of course it is. But in the old cross-bar that now constitutes a part of the new brace, and it is nowhere intimated in the Diehl patent that the treadle can be hung in the vertical double cross-brace. Diehl's band-wheel also is "entirely supported within the brace," but can it be for a moment contended that it has any support whatever in the old common cross-bar, cast integral with the vertical double brace?

(2.) We have no desire to fill this brief up with drawings and pictures attempting to show by graduation of drawings, that two things that are not the same thing, can be made by gradual steps in illustrative drawings to stand for the same thing. We would call the attention of this court, however, in this connection, to the second Singer machine, having its treadle hung upon point center screws passing through the legs of the stand, and to the fact of the usual double vertical cross-brace being bolted solidly to the legs of the machine a short distance from the point of hanging the treadle therein on the point center screws. In this stand the old common cross-bar is omitted, and the only brace in the machine is the usual vertical double brace. Now it must have occurred a thousand times, even to the most stupid mechanic or handler of these machines, that the same point center screws upon which the treadle was hung in the second

old Singer machine could pass through the lower ends of the vertical double cross-brace, and thus save one set of bolts or screws, and one set of holes in the legs of the stand, utilizing one point center screw for both purposes; and if there had been the slightest defect in any way, as claimed by Cramer and his counsel, in the hanging of the treadle, this would have been done. But there was no such defect, and the lower end of the brace was not moved up upon the point center screws and there held in the second Singer machine because the brace itself, as a brace clogging and filling up the stand below the head of the machine, is a nuisance to the knees and the dress of the woman who operates it, and in the second Singer machine, for this reason, was moved back from that point, where it was in the first Singer machine, as shown by the stand in evidence. We say how easy it would be to stop here and draw pictures of the second Singer machine, at its lower end moved up to and held in place by the point center screws that pass through the legs and hold the treadle in operative position, and thus illustrate pictorially the fact that every semblance of contention for this idealized first claim of Cramer could be found in this slight manifest change, if desired, and if, indeed, there was the slightest necessity.

(3.) Respondent's counsel seems to take much umbrage in his Addenda Brief at the fact that petitioner has made it certain upon the presentation of this case that at the date of the filing of the petition for certiorari, although the Cramer patent had expired nearly two years before, no sewing machine manufacturer, great or small, had ever hung its treadle in any manner upon or in connection with the vertical double cross-brace, nor had changed the old style of hanging the treadle in or upon

the cross-bar, or in the legs of the machine. This fact was sworn to, in the petition as filed, by the president of the Singer Manufacturing Company, as appears in the petition (p. 18), and would seem to be a relevant fact that ought to be known to the court. The fact was not denied or the statement criticised in the opposing brief of respondent's counsel for the granting of the petition, but practically admitted to be justified, and it would seem to be a little late now in an Addenda Brief to challenge the presence of such fact in this court.

II.
Damages.

(1.) The discussion of respondent's counsel in his Addenda Brief to the question of damages is so curious as to be fantastic. Respondent's counsel seems to consider that wild conclusions and reckless statements that have in them no element of fact, and indeed are entirely contradictory to the facts and evidence in the case, shall be taken and treated as if such conclusions were evidence. We have quoted in our main brief all of the facts relating to the manufacture and the attempted sale of twenty-five to forty braces by Cramer under his patent, for a period of five years beginning with the year 1881. There is not a word of proof in this record in substantiation of the statements of respondent's counsel that the Singer Company sold their machines for $5 less than Cramer, and such a statement, or suggestion even, is grotesquely absurd in the light of Cramer's testimony as to the application of his patented brace in the revamping and sale of second-hand machines. There is not a word of testimony in this case that the Singer Company sold its machines with the Diehl stand for a cent less

than they sold the old stand and treadle. There is not a line of testimony in this record that Cramer ever lost the sale of a machine with his patented treadle by reason of the Diehl stand, and if such an instance had ever happened this record would have contained a detailed account of it upon Cramer's part, and notoriously and admittedly that which sells a sewing machine is its operative mechanism called its head. There is not a word of testimony in this record from any manufacturer, user, or dealer, that he ever bought, sold, or used a stand with the Cramer brace in it in any manner, much less by reason of the presence of such brace; and the only positive testimony as to the use of any stand with the Cramer brace at any time was by the young daughter of Cramer.

(2.) The reckless statement upon the argument by respondent's counsel, that the record showed, and it was so admitted, that Cramer did not use the second claim of his patent in the twenty-five or forty braces made by him between the years 1881 and 1885 is without any justification by the record, and is in direct contradiction and conflict with all the testimony and statements, even as to Cramer himself, upon this point. Cramer testified over and over again that the twenty-five or forty braces were cast in accordance with the brace of his patent, and of course contained the devices of the second, as well as the first, claim. He at all times speaks of putting his patented brace in the second-hand machines. He nowhere says that he used the devices of his first claim alone, or that he ever omitted the devices of his second claim. In fact, he carefully points out how he made the block and cushion, and what he made such block and cushion out of, that he allied with his brace to hold his treadle in place and produce the combination of his second claim; and says that the cushion and block only cost

about a cent to make; that he cut the block out of a broom stick, and made it in that way, etc. (Record, p. 105.) More than all this, it is perfectly evident from Cramer's patent, to make the treadle bearings stay in place in operative condition, some devices, either the devices of the second claim of the patent, or substantially such devices, must be used. Cramer, in fact, so testifies, and even fifteen years afterwards attempts to attribute their sole function in the twenty-five or forty braces sold by him, "to prevent the noise that would be made were they not there." (Record, p. 112.)

(3.) Respondent's counsel also seems to now assert that the allegation of the petitioner, for the writ of certiorari, as to the large number of suits since brought by respondent against the Singer Company in the various circuits and districts of the United States, and the fact that such suits are founded upon the jury finding in this case, and aggregate many millions of dollars in asserted damages, as set forth in the petition for writ (pp. 8-9), is without any opportunity for consideration at the hands of this court.

These facts and conditions were distinctly stated in the petition, and as one of the grounds for its presence in this court, namely, to determine whether or not a patentee can limit his claim for damages in a jury action to the particular district in which such suit is brought, and then divide and subdivide his claims against an alleged infringing manufacturer into separate suits in every district of the United States, and confine the recoveries for the alleged infringing acts in such separate districts by such separate suits by jury trials. In the brief filed by respondent's counsel opposing the application and grant of this petition respondent's counsel admitted these

acts, and justified under them, respondent's counsel stating in said brief (p. 7) as follows:

> "As to the second ground, it is charged that Cramer is guilty of improper methods, because he has filed separate suits in separate districts; but in this course he is merely doing what the law allows him to do, namely, to sue in the district where the infringement actually occurs, and the defendant has a managing agent. . . . If there is anything reprehensible in this course, we fail to see it. Cramer is merely pursuing the remedies allowed him by the statute, and is proceeding in the method allowed by the statute."

It is the contention of the petitioner's counsel that these statements do not represent the law of the case, and such suits should not be permitted.

(4.) Respondent's counsel seems to consider that the finding of the jury as to damages should stand, even if the whole fabric or foundation is guess work, because of the fact that respondent Cramer wrote the Singer Company a letter as to his patent about the date of its grant, and wanted to sell it to the company. This letter was read in full at the hearing before your Honors, with much emphasis and attempted impressiveness. How entirely futile and unimportant this letter is when we find from Cramer's testimony, and the testimony of his daughter, that this same letter was written at about the same time to every sewing-machine manufacturer in the United States. This fact and the result is shown in the following two questions and answers from Cramer's testimony:

> "Q. With how many of these different manufacturers of sewing machines did you try to make a deal for your patent?
>
> "A. *I think I wrote to all of them. So far as*

I remember now it was all of them." (Record, p. 86.)

"Q. Did you succeed in getting an offer for any kind of a deal for your patent, or for your invention, from any of these companies?

"A. *No, sir. I did not.*" (Record, p. 87.)

His daughter testified to the same effect. (Record, p. 155.)

Respondent's counsel stated to your Honors upon argument that 7,000 patents have been issued upon sewing machines. The probabilities are that more than half of these 7,000 supposed inventors did exactly what Cramer did, and wrote every one of the leading sewing-machine manufacturers of the country with precisely the same tenor and purpose exhibited in the Cramer letter.

III.

The Diehl patent as evidence and as bearing upon the construction of the Cramer patent and infringement.

Substantial space is given in respondent's Addenda Brief in an endeavor to show that the trial court and the Court of Appeals committed no error in disregarding the requested instructions of the Singer Company as to the force and effect of the Diehl patent bearing upon the question of infringement, and the ignoring of that patent for such purpose in the instructions as actually given by the trial court. We have cited the law in our main brief in support of our contention and find nothing in the criticisms or discussion of these decisions in the Addenda Brief to limit the full scope of our contention as to this matter.

We respectfully insist further, in addition to the authorities cited, that the presence of this Diehl patent in

this record, not only as an explanation or as a justification of the brace stand of the Singer Company, but that such patent is practically decisive in sweeping away every contention or assertion of infringement of the Cramer patent by the Diehl structure. It is not contended by counsel for the respondent that the Diehl stand can be swept under the Cramer patent as an infringement, or that it be permitted by a jury so to do, unless such patent be construed as a "pioneer." The decision of this court in the case of *Westinghouse* v. *Boyden Power Brake Co.*, 170 U. S., 561, contains the most recent, clear and conclusive statement and argument of this court upon the question of "pioneer" patents, and is peculiarly applicable to the facts in this case, this court saying:

> "To what liberality of construction these claims are entitled depends to a certain extent upon the character of the invention, and whether it is what is termed in ordinary parlance a 'pioneer.' This word, although used somewhat loosely, is commonly understood to denote a patent covering a function never before performed, a wholly novel device, or one of such novelty and importance as to mark a distinct step in the progress of the art, as distinguished from a mere improvement or perfection of what had gone before. Most conspicuous examples of such patents are: The one to Howe* of the sewing machine; to Morse of the electrical telegraph; and to Bell of the telephone. The record in this case would indicate that the same honorable appellation might be safely bestowed upon the original air-brake of Westinghouse, and perhaps also upon his automatic brake. In view of the fact that the invention in this case was never put into successful operation, and was to a limited extent anticipated by the Boyden patent of 1883, it is perhaps an unwarrantable extension of the term to

* *Note* by the authors—the first of the 7,000.

> speak of it as a 'pioneer,' although the principle involved subsequently and through improvements upon this invention became one of great value to the public."

The question of the construction of the patent being for your Honors, and it not appearing on the face of the Cramer patent, or from the evidence, that Cramer is or can be a "pioneer," as fixed by the above decision; and there being nothing on the face of the Cramer patent that requires evidence, explicit or otherwise, to explain terms of law, or to apply the description of the subject-matter, and the court being able by a mere comparison to determine what are the inventions described in the Cramer patent, there is in this case alone, under the above decision, we confidently contend, a question of pure construction, and not of evidence, and that therefore there was no auxiliary matter of fact to be passed upon by the jury in the light of this single controlling question in this case; and that when this Cramer patent is read, in view of the admitted state of the art of record both as to patents and old mechanisms, and in view of the uncontradicted evidence in this case as distinguished from speculations, conclusions, and unsupported assertions, this verdict should not stand.

Conclusion.

Finally, your Honors, we earnestly submit that this is not a case of a "pioneer" inventor who has blazed a trail and pathway through a trackless forest that has been widened to a great highway and travelled by subsequent followers, but it is the case of one of a multitudinous horde of supposed inventors leaving the beaten road and

attempting to grope his way blindly through a forest and mark out a trail that in fact is simply a stumbling pathway that leads to, and ends in, only the bog and mire of oblivion.

Respectfully submitted,

CHARLES K. OFFIELD.

CHARLES C. LINTHICUM.

For Petitioner.

In the Supreme Court of the United States

OCTOBER TERM, A. D. 1901.

FROM THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT.

THE SINGER MANUFACTURING COMPANY,

Petitioner,

vs.

HERMAN CRAMER,

Respondent.

STATEMENT OF FACTS.

On October 8, 1896, Herman Cramer began this action at law against the Singer Manufacturing Company in the United States Circuit Court for the Northern District of California, alleging infringement of letters patent No. 271,426, granted January 30, 1883, for an improvement in sewing machine treadles, and asking a judgment for damages.

An answer was filed by the Singer Company on March 18, 1897, setting up numerous defenses, among which was one of alleged prior adjudication based upon a judgment rendered for the defendant in a former case brought by Herman Cramer against one Willis B. Fry.

The case came to trial on August 10th, 1898, and at the conclusion of the testimony the judge presiding (Honorable James H. Beatty of the Idaho District) instructed the jury to find a verdict for the defendant solely on the ground that the judgment in the case of *Cramer* vs. *Fry* operated as a prior adjudication against Cramer.

A bill of exceptions was thereupon tendered by Cramer and signed and sealed by the court, whereby the case was removed to the United States Circuit Court of Appeals for the Ninth Circuit.

Upon a hearing in the Court of Appeals it was there held that the judgment in the case of *Cramer* vs. *Fry* did not operate as a prior adjudication, and accordingly the judgment was reversed and the case remanded for a new trial. (*Singer Manufacturing Co.* vs. *Cramer*, 93 Fed. Rep., 636.)

A petition for rehearing was filed, but the same was denied, and thereupon the Singer Company filed an application in this court at the October term of 1899, pray-

ing for the issuance of a writ of *certiorari*. That application was denied by the court on October 30, 1899. (*Singer Manufacturing Co.* vs. *Cramer*, 175 U. S., 725.)

The case then went back to the Circuit Court for a new trial, and after a lengthy trial on the merits a verdict was rendered for the plaintiff on the 20th of April, 1900, for $12,456, for which sum and costs judgment was duly entered.

From this judgment a writ of error was taken by the Singer Company in the Circuit Court of Appeals for the Ninth Circuit. After a full argument in that Court the judgment was affirmed on May 13, 1901. (*Singer Manufacturing Co.* vs. *Cramer*, 109 Fed. Rep., 652.)

A petition for rehearing was made and denied, and thereupon the Singer Company applied to this court a second time for the issuance of a writ of *certiorari*.

We submit that this second application for a writ is as much without merit as was the first one, and is intended merely as an effort to protract this seemingly endless litigation.

ARGUMENT.

I.

The first point urged by counsel for petitioner is stated as follows:

> *"The petition should be granted because there has been such diverse construction of respondent's patent by various federal judges in separate trials as would demand that a final settlement of its rightful construction and application should be made by this court.*

In support of this contention it is pointed out by counsel for petitioner that in the case of *Cramer* vs. *Fry*, 68 Fed. Rep., 201 the judge then presiding (Hon. Joseph McKenna) construed the patent and instructed the jury to find a verdict for the defendant on the ground of non-infringement. It is further pointed out that in the present case, upon the first trial, Judge Beatty followed the ruling of Judge McKenna, which ruling was reversed by the Court of Appeals, and upon the second trial of the case Judge Morrow likewise construed the patent, and while holding it to be a narrow invention, submitted the question of infringement to the jury, which ruling was affirmed by the Court of Appeals.

We fail to discover in these facts any such diversity of opinion as would justify the issuance of a writ of *cer-*

tiorari. Our understanding of the law applicable to such cases is that where there is a diversity of opinion between two different *courts of appeals,* this court will issue a writ of *certiorari* in the interest of uniformity of decision; but it strikes us as a novel proposition to claim that the writ should issue where the alleged conflicting decisions are in the same circuit, and one of them is by the *nisi prius* court and the other by the appellate court. Every judgment that is reversed presents a case of difference of opinion between judges, but the learned counsel should know that the decisions of the appellate court are final and conclusive. Consequently, it matters not in the case at bar what were the views, opinions, or judgments of the lower court, because the judgment of the Court of Appeals is by the statute made final and conclusive. It establishes the law of the case, and unless some other circuit court of appeals should hold differently, there would not be that conflict of decision which justifies the issuance of a writ of *certiorari.* This matter appears to us so elementary that we must be pardoned for not arguing it. The bare statement of the facts is, in our judgment, all that is necessary to be presented to this court.

II.

The second point urged by counsel for petitioner is stated in the following language:

> *"That vast sums of money claimed by the respondent Cramer, of the petitioner, by reason of the patent and this single jury verdict, the methods used by respondent Cramer to enforce such demands, and the ignoring of the rules of decisions of this court alone securing such results, represent such matters of gravity and importance as entitle the granting of this petition."*

This is evidently an attempt to bring the case within the rule laid down by this court to the effect that the writ of *certiorari* will be granted sometimes in matters of gravity and general importance.

In the case of *Lau Ow Bew, Petitioner,* 141 U. S., 583, the construction of Acts of Congress in the light of treaties with a foreign government and the status of domicile in respect of natives of one country domiciled in another, a matter of international concern, were considered to be matters of such gravity and importance to the whole country as to justify the issuance of a writ. That case seems to clearly define what was meant by matters of gravity and importance. No such case has been presented by this petitioner. Here we have merely

a private controversy between two litigants in no way affecting the public at large.

Analyzing this "Point II" of the petitioner, it would seem to embrace three grounds in one, viz:

1. *That the respondent Cramer claims vast sums of money.*

2. *Improper methods used by respondent Cramer to enforce such demands.*

3. *Ignoring of the rules of decision of this court.*

These three grounds are stated to be "such matters of gravity and importance as entitle the granting of this petition."

Regarding the first, it is verging dangerously on the puerile. Surely no argument could be required of us in answer thereto.

As to the second ground, it is charged that Cramer is guilty of improper methods, because he has filed separate suits in separate districts. But in this course he is merely doing what the law allows him to do, viz: To sue in the district where the infringement actually occurs and the defendant has a managing agent. It was open to Cramer, who lives in California, to go to New Jersey, where the Singer Company is incorporated, and bring a single suit to recover all the damages due him, or to bring several suits in the several districts where the

infringements occurred, and to recover in each suit the damages due him in that district.

If there is anything reprehensible in this course, we fail to see it. Cramer is merely pursuing the remedies allowed him by the statute, and is proceeding in the method allowed by the statute. To have required him to travel across the continent and institute an omnibus case in New Jersey, where the defendant is domiciled, would have entailed upon him such hardship and expense that it would amount practically to a denial of justice. Cramer is an old man, residing in the mountains of California, afflicted both with extreme poverty and bad health. Under these circumstances the most natural thing for him to do was to bring suit at his own home, where it could be prosecuted speedily and at small expense, and this is the whole explanation of the fact that he began his first suit in California.

The third ground urged under counsel's "Point II," viz: "*the ignoring of the rules of decision of this court*," is not elaborated in his brief at all, nor does the learned counsel vouchsafe to state wherein any rule of this court has been ignored, nor by whom. Evidently this matter was put in merely for the purpose of rounding off a nice rhetorical period. Such glittering generalities have no proper place in a dignified argument before the highest tribunal of the land.

III.

The remaining points made by counsel for petitoner may be grouped together, inasmuch as the answer to one is an answer to all of them. They are stated in the brief as follows:

"Point III. The petition should be granted because the only rightful construction that can be put upon the respondent Cramer's patent, read in connection with, and in the light of the file wrapper and contents thereof, is the construction given by his Honor, Judge McKenna, in the case of the respondent Cramer vs. your petitioner's agent, Fry, 68 F. R., 201.

"Point IV. A rightful construction of the Cramer patent upon the face of the patent itself, without reference to the file wrapper and contents, and the comparison thereof with petitioner's device, demonstrates clearly the fact of non-infringement of the first claim thereof by defendant's structure.

"Point V. The judgment is wholly unjustifiable, because the respondent Cramer suffered no damage of any kind, character, or description whatever by reason of the alleged infringing acts of the petitioner, but, on the contrary, if his patent was of any value or utility, the petitioner furnished a wide market for him therefor.

"Point VI. The petitioner, the Singer Manufacturing Company, could not have damaged the respondent Cramer's "business" in the installation of his patented braces in the existing machines in the State of California, because the petitioner did not send any

sewing machines into the State of California containing the alleged infringing device of Cramer's patent until nearly two years after the abandonment by Cramer of any attempt to place his patented brace in any sewing machine.

"Point VII. This petition for writ of *certiorari* should be granted because the defense by your petitioner of its agent Fry, in the Cramer-Fry suit, tried before and decided by his Honor Judge McKenna by an instruction to the jury to find for the defendant upon the ground of non-infringement, was an open defense made by your petitioner wherein your petitioner paid all costs of such litigation and counsel fees, and such facts were known by respondent Cramer's counsel in that case, as appears by positive proof shown and offered in this case.

"Point VIII. The petition should be granted because the whole record in this case shows that there is absent from the entire testimony, given by the respondent Cramer, any reliable proof that he has suffered any damage by reason of any act of the petitioner; and that upon the face of all of the proof given by him, petitioner's requested instruction to the jury to return a verdict for nominal damages should have been given, if technical infringement should be found to exist.

"Point IX. The petition should be granted because the hanging of a sewing machine treadle in a vertical cross-brace in itself is without practical value, advantage or utility, and manifestly is without patentable novelty."

There is no merit in any of these points. They are all questions of fact upon which the evidence was conflict-

ing. Therefore, the finding of the jury thereon is conclusive.

Is it possible that the learned counsel is not aware of the elementary rule of law that all questions of fact are to be deemed conclusively settled by the verdict of a jury, and that an appellate Federal court cannot review them? Even if this court should grant a writ of *certiorari*, it could not consider any questions except those that were open for consideration by the rules of appellate practice. It could only consider questions of law, and could not interfere with questions of fact that were decided by the jury. In other words, its review of the case would be circumscribed by the same rules as was the review of the case by the Court of Appeals. Following those rules, this court could not consider any of the questions presented in the points of the counsel above quoted, because the verdict of the jury upon those questions must be taken as conclusive. Therefore, we shall not burden this court with any argument regarding them.

The conclusion of the learned counsel's brief is both picturesque and amusing, where he descants upon what he terms "the unqualified hardship, wrong, and injustice that has been done your petitioner.

While it is true that assertions of this kind have no proper place in an argument and can have no influence upon the court, yet we cannot forbear retorting that if

there has been any "hardship, wrong, and injustice" done by either of the parties, it was by the Singer Manufacturing Company and not by Cramer. By reference to the record it will be seen that as early as the year 1883, when this patent was granted, Cramer wrote to the Singer Manufacturing Company, calling their attention to his patent and asking them to adopt it and pay him a small royalty therefor. They answered by saying in substance that the device was of no value and they did not care to use it. Consequently, his request for a royalty was denied. And yet within six months thereafter we find this same Singer Company, through its head mechanic, applying for a patent for an alleged improvement upon this Cramer device in plain infringement thereof, and this device the company immediately put upon the market, and ever since then the same has been used in all its standard machines, many millions of which have been sold. Cramer immediately called their attention to the fact that they were infringing, but they ignored his demands and treated him with contempt. Thereupon he was compelled to commence suit against them, and he has been engaged in this litigation for these many years, until his patent has expired. It would be a nice calculation to determine the "vast sums," if counsel will pardon us for using his own language, which the Singer Company has made by its piratical use of the Cramer

invention. That they were "vast sums" there can be no manner of doubt, but that the company intends to make no reparation, if it can possibly avoid it, is equally without doubt. Under such circumstances, it does not require the wisdom of a Solomon nor the judicial acumen of an Eldon or a Mansfield to properly locate, as between these litigants, "the unqualified hardship, wrong, and injustice."

It is apparent to us that the application for this writ is merely in line with the policy of the Singer Company to wear out its antagonist, Cramer, by protracted litigation. The points presented to this court have been argued so often by the learned counsel and so often decided against him by the courts, that he ought to know by this time that there is no merit in them. They were argued at length on the first trial, then again on the hearing in the Court of Appeals, then on petition for rehearing in the Court of Appeals, and then in this court on the first application for a writ of *certiorari;* then again they were argued on the second trial in the Circuit Court, then on the second hearing in the Court of Appeals, then on petition for rehearing in the Court of Appeals, and finally on this second application for a writ of *certiorari.* The number of briefs that have been written by the counsel would fill a library, and the amount of money his clients have spent in the

litigation is a small fortune. No disposition has ever been shown to make the slightest reparation to Cramer for the wrong and injustice done him in appropriating his invention, but the studied effort of the company has at all times been to pay him nothing and to wear him out by protracted litigation. The mere fact that this is a second application to this court for a writ of *certiorari* in the same case shows the persistency of the counsel and the limit to which he is willing to go. It is not often in a patent case that a counsel makes *one* application to this court for a writ of *certiorari*, for the circumstances must be unusual which would justify the issuance of such a writ; but a second application for this writ after the first has been refused, in a case which presents nothing more than a controversy between two private individuals, tends strongly to show the animus which prompts that course. Cramer's patent expired two years ago, and during the whole life of his patent he has been engaged in this seemingly endless litigation; and now, when he appears to be nearing the end, he is further delayed by the present application for a writ of *certiorari*. Is not this a case for an application of the benign maxim: *Interest reipublicae ut finis sit litium?*

Respectfully submitted,

JOHN. H. MILLER,
Counsel for Herman Cramer.

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No. 215.

In the Supreme Court of the United States

OCTOBER TERM, 1902

THE SINGER MANUFACTURING COMPANY,
Petitioner,

vs.

HERMAN CRAMER,
Respondent.

Brief on Behalf of Respondent.

STATEMENT OF FACTS.

This case comes here by writ of *certiorari* to the circuit court of appeals for the ninth circuit. The action was at law, brought by respondent, Herman Cramer, against the petitioner, Singer Manufacturing Company, to recover damages for the infringement of patent No. 271,426, which had been granted to said Cramer on January 30, 1883, for an

improvement in sewing machines. A verdict was rendered in favor of Cramer for $12,456 by the jury, for which sum, with costs, judgment was entered. The Singer Company sued out a writ of error and the case was removed to the circuit court of appeals for the ninth circuit, where the judgment was affirmed. (*Singer Manufacturing Co.* vs. *Cramer,* 109 Fed. Rep., 652.)

Thereafter the Singer Company applied to this court for a writ of *certiorari,* which writ was granted, and the case is now before this court for hearing upon said writ.

The controversy between the parties is one of long standing. In 1893 Cramer commenced an action at law for infringement of his patent, in the circuit court for the northern district of California, against the Singer Manufacturing Company and its local agent, Willis B. Fry, jointly. (Rec. 347.) The Singer Company interposed a demurrer to the declaration on the ground that the court had no jurisdiction over said corporation for the reason that it was created under the laws of New Jersey, and could not, therefore, be legally sued in the northern district of California. (Rec., 349.) This demurrer was argued before Mr. Justice McKenna, then circuit judge for

the northern district of California, and by him sustained on November 27, 1893. (*Cramer* vs. *Singer Manufacturing Co.,* 59 Fed. Rep., 74.)

This ruling was in accordance with the law and decisions existing at that time, which exempted a corporation from suit in any other district than that whereof it was an inhabitant. Since then the act of March 3, 1897, defining the jurisdiction of the United States circuit courts in cases for the infringement of patents, has been enacted, authorizing suit to be brought against a corporation either in the district of which it is an inhabitant or in any district where the act of infringement is committed and the defendant has a regular and established place of business with a managing agent in charge thereof.

In the judgment sustaining the demurrer of the Singer Manufacturing Company, above referred to, it was specially provided that the judgment so rendered was "without prejudice to the right of "Cramer to commence another suit for the same "cause of action." (Rec., 351.)

Thereafter the old action proceeded against Willis B. Fry personally and alone, under the title of *Cramer* vs. *Fry,* and after a trial before a jury, resulted in a verdict for the defendant Fry in that case,

under a peremptory instruction from the court to the jury to so find. (Rec., 357.) This was on April 12, 1895. (*Cramer* vs. *Fry,* 68 Fed. Rep., 201.)

Afterwards, on October 8, 1896, in accordance with the permission contained in the judgment in the Fry case, Cramer instituted the present action at law for infringement of his patent against the Singer Manufacturing Company alone in the circuit court for the northern district of California. (Rec., 3.)

In this action the Singer Company interposed as a defense the judgment which had been rendered in favor of Willis B. Fry in the former case of *Cramer* vs. *Fry,* claiming that the same operated in favor of the Singer Company on the ground that Fry was their agent, and that they had defended the suit. (Rec., 22.) The lower court (Judge James H. Beatty, of Idaho, presiding) sustained this defense and instructed the jury to render a verdict for the defendant, which verdict was rendered and judgment entered thereon. (Rec., 24-25.) Cramer then sued out a writ of error and removed the case to the court of appeals for the ninth circuit. On consideration thereof the circuit court of appeals reversed the judgment and remanded the case for a new trial. The ground of reversal was that it did not appear

that the former case of *Cramer* vs. *Fry* had been defended by the Singer Company openly and to the knowledge of the plaintiff so as to constitute an estoppel, and consequently it was no estoppel. (*Singer Manufacturing Co.* vs. *Cramer,* 93 Fed. Rep., 636.)

Application was then made to this court by the Singer Company at the October term of 1899 for a writ of *certiorari,* but the application was denied. (*Singer Manufacturing Co.* vs. *Cramer,* 175 U. S., 725.)

Thereupon the case went back to the circuit court for the northern district of California, and was duly and regularly tried before his Honor Judge Morrow and a jury on April 20, 1900, resulting in a verdict for plaintiff for $12,456. (Rec., 30.) Upon this verdict a judgment was entered, (Rec., 31), and to reverse this judgment the Singer Company sued out a writ of error and removed the case to the circuit court of appeals for the ninth circuit. On a hearing before the court of appeals the judgment was affirmed. (*Singer Manufacturing Co.* vs. *Cramer,* 109 Fed. Rep., 652.)

Thereafter on application of the Singer Company this court granted a writ of *certiorari,* bringing the

case here for review. The case is now before the court for argument on that writ.

It will thus be seen that this controversy in one way and another has been pending in the courts for ten years. There have been three separate trials before juries, two appeals to the court of appeals and two applications to this court for writs of *certiorari*. In his charge to the jury the learned judge of the lower court said:

"I desire that the trial of this case shall dispose "of the controversy between the parties with re- "spect to this subject matter, and I do not desire to "pass over any question without very carefully and "very fully considering all the matters involved, "so that whatever may happen hereafter it may dis- "tinctly appear that the court has considered the "question in every possible phase."

We reiterate the wish expressed in the above quotation, and trust that this court will affirm the judgment in question, and thereby put an end to this tedious and long-drawn-out litigation.

The bill of exceptions contains sixty-nine assignments of error, and inasmuch as we do not at this time know which of these will be relied on, it will be necessary for us to consider them all. We shall endeavor, however, to lighten the labors of the court

as much as possible by bunching these assignments of error and treating them in groups, rather than singly, wherever this can be done.

So grouping them they may be divided as follows:

1. Exceptions to refusal of the court to instruct the jury to render a verdict for the defendant, embodied in assignments 11 and 12.

2. Exceptions to the admission and rejection of evidence, embodied in assignments 1, 2, 3, 4, 5, 6, 7, 8, 9, and *10.*

3. Refusal of the court to instruct the jury that a witness false in one part of his testimony is to be distrusted in others, embodied in assignment 13.

4. Exceptions on the subject of the Diehl patent as evidence, embodied in assignments 36, 37, 40, 41, 42, and 64.

5. Exceptions relating to the question of damages, embodied in assignments 24, 25, 66, 67 and 68.

6. Exceptions to instructions given and refused on minor points, embodied in assignments 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 38, 39, 43, 44, 45, 46, 47, 48,

49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, and 65.

These matters we now take up *seriatim*. For convenience, we shall in this brief refer to the parties as they were designated in the trial court—Cramer as *plaintiff*, and the Singer Manufacturing Company as *defendant*.

I.

EXCEPTIONS TO THE REFUSAL OF THE COURT TO INSTRUCT THE JURY TO RETURN A VERICT FOR DEFENDANT, RAISED BY ASSIGNMENTS OF ERROR 11 AND 12.

It appears from the bill of exceptions that *at the close of the plaintiff's case* counsel for defendant requested the court to instruct the jury to return a verdict for the defendant upon the following grounds:

"1. *For the reason that said claim 1 of the pat-*
"ent does not cover any patentable invention.
"2. *Because no infringement has been proved.*
"3. *Because there is no evidence whatever of any*
"damages sustained by the plaintiff." (Rec., 194.)

This motion was denied, but no exception was taken, and the defendant then offered evidence in defense of the action on the merits.

Under these circumstances there was no reversible error in the refusal of the court to direct a verdict *at the close of the plaintiff's case.*

Accident Ins. Co. vs. *Crandall,* 120 U. S., 530.
Northern Pac. R. R. vs. *Mares,* 123 Id., 713.
Robertson vs. *Perkins,* 129 Id., 236.
Columbia vs. *Hawthorne,* 144 Id., 202.

Afterwards, and at the close of the whole case, counsel for defendant moved the court "to instruct "the jury to find a verdict for the defendant upon "the ground that no infringement whatever has been "shown." (Rec. 394.)

And prior to the submission of the case to the jury counsel for defendant requested the court in writing to instruct the jury:

"*In this case you are instructed that under the con-*
"*struction of the patent as given by the court, no in-*
"*fringement exists, and your verdict must be for*
"*the defendant.*"

Both of the above requests were denied and exceptions taken. (Rec., 400.) These exceptions constitute Assignments of Error 11 and 12. (Rec. 437), and they challenge the correctness of the court's ruling in refusing to instruct the jury to return a ver-

dict for defendant on the ground that "no infringe-
"ment whatever has been shown."

Did the court err in refusing to give such instructions?

This brings up the much discussed question of when a Federal court is justified in directing a jury to return a verdict a particular way. It is not questioned that the court has the power to do this in a proper case; but at the same time it must be conceded by all that it is a power which will not be exercised arbitrarily nor in any other than the plainest case.

Article VII of the Federal Constitution guarantees to litigants in action at law the right of trial by jury, according to the principles of the common law, and provides that no fact tried by a jury shall be otherwise re-examined in any court of the United States than according to the rules of the common law. The revised statutes of the United States (Section 4919) confer on patentees the right to recover damages for infringement of their patents by the common-law remedy of an action on the case. Hence the right to a trial by jury in an action at law for the infringement of a patent is a constitutional

right, which it is the policy of the law to jealously guard and protect.

In the case of *Coupe* vs. *Royer,* 155 U. S., 557, Mr. Justice Shiras said:

"This court has had occasion more than once to "reverse the trial court for taking away from the "jury the question of infringement."

And in *Tucker* vs. *Spalding,* 13 Wall., 455, Mr. Justice Miller said:

"Whatever may be our personal opinions of the "fitness of the jury as a tribunal to determine the "diversity or identity in principle of two mechani- "cal instruments, it cannot be questioned that when "the plaintiff, in the exercise of the option which the "law gives him, brings his suit on the law, in pref- "erence to the equity side of the court, that question "must be submitted to the jury, if there is so much "resemblance as raises the question at all."

Mr. Justice Bradley gave expression to the same thought in *Bischoff* vs. *Wethered,* 9 Wall., 814; and in the very recent case of *Patton* vs. *Texas and Pacific Railway Co.,* 179 U. S., 660, Mr. Justice Brewer said:

"It is undoubtedly true that cases are not to be "lightly taken from the jury; that jurors are the "recognized triers of questions of fact. * * *

" Hence it is that seldom an appellate court reverses " the action of a trial court in declining to give a " peremptory instruction for a verdict one way or " the other."

Therefore, the petitioner in this proceeding must make out a very strong case before it can hope to persuade this court that the learned judge of the lower court should have peremptorily ordered the jury to find a verdict for the defendant and thereby deprive Cramer of his constitutional right to a trial by jury.

It will be observed that the instruction was requested solely on the ground that no infringement had been shown. In other words, the contention of our adversary is that the court should have compared the defendant's machine with the plaintiff's patent in order to determine whether it came within the claim of the patent, and having determined that it did not, should have told the jury to find accordingly. We submit that it would have been usurping the function of a jury for the court to have followed this course. Ordinarily the question of infringement is purely one of fact, and as such must be submitted to the jury. It is true that the question of infringement depends primarily upon the scope of

the patent claim, and that it is the province of the court to construe the claim and to tell the jury what it covers. Having gone that far, the power of the court ceases, and then it becomes the province of the jury to say whether or not defendant's structure falls within the patent claim as construed by the court.

The law is very clearly stated in *Curtis on Patents,* at Section 469, where it is said:

"The question of infringement is a question "whether the invention of the defendant is substan- "tially the same as that of the plaintiff. The iden- "tity of two things is a matter of fact depending "upon evidence; and although it is to be de- "termined under the guidance of those principles "which determine what constitutes identity and di- "versity in the sense of the patent law, yet it is for "the jury to determine, as matter of fact, under "proper instructions, whether the two things are the "same or different. This is true even where there "is no dispute as to the particular process or ma- "chine employed by the defendant, but only wheth- "er that process or machine is an infringement. *The "court cannot compare the plaintiff's invention with "that which is used by the defendant and say that the "two are identical.*"

And in *Robinson on Patents,* Vol. 3, page 378, it is said:

"Where the defense denies that the invention used "by the defendant is identical with that included "in the plaintiff's patent, the court defines the pat- "ented invention as indicated by the language of "the claims; the jury judge whether the invention "so defined covers the art or article employed by "the defendant."

This quotation from Robinson was cited and approved by this court as a correct statement of the law in the case of *Coupe* vs. *Royer*, 155 U. S., 579.

Such has been the law laid down by this court in patent cases from the earliest day. Thus in *Battin* vs. *Taggert*, 17 How., 84, which was decided half a century ago, the lower court had instructed the jury to find a verdict for the defendant. In reversing the case for that error this court, through Mr. Justice McLean, said:

"This, as well as the two instructions above no- "ticed, took from the jury facts which it was their "province to examine and determine. It was the "right of the jury to determine from the facts in the "case whether the specifications, including the "claims, were so precise as to enable any person "skilled in the structure of machines, to make the "one described. This the statute requires, and of "this the jury are the judge. The jury are also to "judge of the novelty of the invention, and whether "the renewed patent is for the same invention as the

"original patent; and they are to determine wheth-
"er the invention has been abandoned to the public.
"There are other questions of fact which come with-
"in the province of the jury, such as *the identity of*
"the machines used by the defendant with that of the
"plaintiff, or whether they have been constructed
"and act on the same principle."

In *Bischoff* vs. *Wethered,* 9 Wall., 812, an action was brought to recover damages for the violation of a covenant as to the validity of a patent sold by the defendant to the plaintiff. The plaintiff contended that the patent was invalid because of anticipation by another patent, and he requested the court to construe the two patents and instruct the jury to render a verdict for plaintiff on the ground that they were identical, and therefore that the earlier anticipated the latter. This raised the same proposition that would be raised by the request of a defendant in an action at law for the infringement of a patent for an instruction to the jury to find for the defendant on the ground of anticipation. The lower court refused to give such instruction, on the ground that anticipation was a question of fact for the jury to find; and as infringement and anticipation are the reciprocals of each other, that case is pointed au-

thority for the case at bar. In rendering the decision of this court, Mr. Justice Bradley said:

"It is undoubtedly the common practice of the "United States circuit courts in actions at law on "questions of priority of invention, where a patent "under consideration is attempted to be invalidated "by a prior patent, to take the evidence of experts "as to the nature of the various mechanisms or man-"ufactures described in the different patents pro-"duced, and as to the identity or diversity between "them; and to submit all the evidence to the jury "under general instructions as to the rules by which "they are to consider the evidence. A case may "sometimes be so clear that the court may feel no "need of an expert to explain the terms of art or "the descriptions contained in the respective pat-"ents, and may, therefore, feel authorized to leave "the question of identity to the jury, under such "general instructions as the nature of the documents "seems to require. And in such plain cases the "court will probably feel authorized to set aside a "verdict unsatisfactory to itself, as against the "weight of evidence. But in all such cases the ques-"tion would still be treated as a question of fact for "the jury, and not as a question of law for the court. "And under this rule of practice, counsel would "not have the right to require the court, as matter "of law, to pronounce upon the identity or diver-"sity of the several inventions described in the pat-"ents produced. Such, we think, has been the pre-"vailing rule in this country, and we see no suffi-

"cient reason for changing it. The control which "the courts can always exercise over unsatisfactory "verdicts will enable them to prevent any wrong "or injustice arising from the action of juries; "whereas, if the courts themselves were compella- "ble to decide on these often recondite and difficult "questions, without the aid of scientific persons fa- "miliar with the subject of the invention in question, "they might be led into irremediable errors which "would produce great injustice to suitors. We are "disposed to think that the practice adopted by our "courts is, on the whole, the safest and most con- "ducive to justice. It may be objected to this view "that it is the province of the court, and not the "jury, to construe the meaning of documentary evi- "dence. This is true. But the specifications for "patents for inventions are documents of a peculiar "kind. They profess to describe mechanisms and "complicated machinery, chemical compositions "and other manufactured products, which have "their existence *in pais*, outside of the documents "themselves; and which are commonly de- "scribed by terms of the art or mystery to "which they respectfully belong; and these "descriptions and terms of art often require "peculiar knowledge and education to under "stand them aright; and slight verbal variations, "scarcely noticeable to a common reader, would be "detected by an expert in the art, as indicating an "important variation in the invention. Indeed, the "whole subject matter of a patent is an embodied "conception outside of the patent itself, which, to

"the mind of those expert in the art, stands out in "clear and distinct relief, whilst it is often unper- "ceived, or but dimly perceived by the uninitiated. "This outward embodiment of the terms contained "in the patent is the thing invented, and is to be "properly sought, like the explanation of all patent "ambiguities arising from the description of exter- "nal things, by evidence *in pais.*"

The learned justice then proceeds to point out that this same question had undergone much discussion in the courts of England, where the same conclusion had been reached. In the earlier cases there the matter had been viewed differently. Thus, in *Bovill* vs. *Pimm,* 36 E. L. & Eq., 441, the court of Exchequer held that it was a question of law, the facts being undisputed.

And so likewise in the case of *Betts* vs. *Menzies,* 1 Ell. & Ell. Q. B., 990, it was held by the Exchequer Chamber, on appeal from the court of Queen's Bench, that the question was one of law for the court. But after those decisions the case of *Hill* vs. *Evans,* 31 L. J. Ch., 463, came up before Lord Chancellor Westbury, and he reversed the ruling which had been made in the former cases, and delivered an opinion which has ever since been considered an unanswerable authority. Amongst other things he said:

"It is undoubtedly true as a proposition of law "that the construction of a specification, as the con- "struction of all other written instruments, belongs "to the court; but a specification of an invention "contains, most generally, if not always, some tech- "nical terms, some phrases of art, some processes, "and requires generally the aid of the light derived "from what are called surrounding circumstances. "It is, therefore, an admitted rule of law that the "explanation of the words or technical terms of art, "or phrases used in commerce and the proof and "results of the processes which are described (and "in chemical patents the ascertainment of chemical "equivalents), that all these are matters of fact up- "on which evidence may be given, contradictory tes- "timony may be adduced, and upon which undoubt- "edly it is the province and the right of a jury to "decide."

He then proceeds to point out that it is the duty of the court to construe the specification, and referring to that duty, says:

"But after that duty is discharged there would "remain a most important function to be still per- "formed, which is the comparison of the two instru- "ments when they have received their legal expo- "sition and interpretation; and as it is always a "matter of evidence what external thing is indica- "ted and denoted by any description, when the jury "have been informed of the meaning of the de- "scription contained in each specification, the work

"of comparing the two, and ascertaining whether "the words, as interpreted by the court, contained "in Specification A, do or do not denote the same "external matter as the words, as interpreted and "explained by the court, contained in Specification "B, is a matter of fact, and is, I conceive, a matter "within the province of the jury, and not within "the function of the court. Granting, therefore, to "the full extent, the propriety of the expression of "the rule which is here contained, and taking either "specification as so interpreted, whether the two spe- "cifications that are brought into comparison do or "do not indicate the same external matter, must be "determined by the jury, and not be determined as "a matter of law by the court."

Thereafter, the case of *Betts* vs. *Menzies,* cited above, was appealed to the House of Lords, and the decision of the lower court in that case was reversed, and the ruling that had been made in *Hills* vs. *Evans* was adopted. In there rendering the decision Lord Chancellor Westbury used the following language:

"As the specifications described external objects, "where the language in both specifications should "be identically the same, it would be impossible "to predicate of the two that they described exactly "the same identical external object unless the terms "of art used in both the specifications could be as- "certained to have been the same at the date of "both the patents. The question of identity of sig-

"nification belongs to the province of evidence, not "the province of construction."

Betts vs. *Menzies,* 10 H. L. Cas., 117.

The same generic question has been elaborately considered and ruled on by this court in several cases, the principal ones of which are *Tucker* vs. *Spalding,* 13 Wall., 453; *Keyes* vs. *Grant,* 118 U. S., 25; *Royer* vs. *Schultz Belting Co.,* 135 U. S., 319, and *Coupe* vs. *Royer,* 155 U. S., 557. The one last cited is aptly in point. It was an action at law, tried at Boston, and the defendant requested the court to instruct the jury to return a verdict for the defendant, on the ground of no infringement. There was no dispute as to the character of the defendant's machine, and the request of the defendant was for the court to hold that the defendant's machine did not fall within the scope of the patent claim, and to instruct the jury accordingly. This is identically the question now before the court. The circuit court refused to give the instruction, and while this court reversed the case on the ground that the lower court had not given the proper construction to the patent, it held categorically that upon the new trial which was ordered the case must be submitted to the jury.

Mr. Justice Shiras, in delivering the opinion of the court, said:

"This court has had occasion more than once to "reverse the trial courts for taking away from the "jury the question of infringement, which they have "sometimes done by rejecting evidence of earlier "patents offered to show anticipation, and some- "times by peremptory instruction that a patent re- "lied on by the defense was or was not infringement "of the plaintiff's patent.

"Thus in *Tucker* vs. *Spalding,* 13 Wall., 453, 455, "where an action at law was brought to recover "damages for the infringement of a patent for the "use of removable teeth in saws, and where the de- "fendant offered in evidence, as covering the sub- "ject matter of the plaintiff's patent, a patent prior "in date and invention to that of plaintiff, the ac- "tion of the court below in rejecting this offer of "evidence because, in its judgment, the patent of- "fered did not anticipate the one in suit, was held "to be erroneous by this court, and Mr. Justice Mil- "ler, speaking for the court, used this language: "'Whatever may be our personal opinions of the "'fitness of the jury as a tribunal to determine the "'diversity or identity in principle of two mechani- "'cal instruments, it cannot be questioned that when "'the plaintiff, in the exercise of the option which "'the law gives him, brings his suit on the law, in "'preference to the equity side of the court, the "'question must be submitted to the jury if there "'is so much resemblance as raises the question at

"'all;' and reference was then made to the case of "*Bischoff* vs. *Wethered*, 9 Wall., 812, 814, as one in "which the subject had been fully considered. In "the case so referred to, the subject was discussed "at length, including a review of the English cases, "and the conclusion reached was that, in a suit at "law involving a question of priority of invention, "counsel cannot require the court to compare the "two specifications and to instruct the jury, as a "matter of law, whether the inventions therein de-"scribed are or are not identical. In expressing the "views of the court, Mr. Justice Bradley said: 'A "'case may sometimes be so clear that the court "'may feel no need of an expert to explain the terms "'of art or the descriptions contained in the respect-"'ive patents, and may, therefore, feel authorized "'to leave the question of identity to the jury, un-"'der such general instructions as the nature of the "'document seems to require. And in such plain "'cases the court would probably feel authorized "'to set aside a verdict unsatisfactory to itself, as "'against the weight of evidence. But in all such "'cases the question would still be treated as a ques-"'tion of fact for the jury, and not as a question of "'law for the court.'

"In the case of *Keyes* vs. *Grant*, 118 U. S., 25, 36, "where the defendant set up a prior publication "of a machine anticipating the patented invention, "and where there appeared obvious differences be-"tween the two machines in the arrangement and "relation of the parts to each other, and where ex-"perts differed upon the question whether those dif-

" ferences were material to the result, and where " the court below instructed the jury to return a ver- " dict for the defendants, this court, reversing the " judgment, said, through Mr. Justice Matthews: " ' Clearly it was not a matter of law that the spec- " ' ifications of the plaintiff's patent and the publi- " ' cation of Karsten, taken in connection with the " ' drawings appended in illustration, described the " ' same thing. * * * In our opinion this was a " ' question of fact properly to be left for determi- " ' nation to the jury, under suitable instruction from " ' the court upon the rules of law, which should " ' guide them to their verdict.'

" And in the case of *Royer* vs. *Schultz Belting Co.*, " 135 U. S., 319, which arose upon an alleged in- " fringement of the same patent here in suit, and " where the question was chiefly to be determined " by a comparison of the two machines, this court " held that the circuit court erred in not submit- " ting to the jury the question of infringement un- " der proper instruction.

" The doctrine of the cases is aptly expressed by " Robinson in his work on patents, vol. 3, page 378, " as follows: 'Where the defense denies that the " ' invention used by the defendant is identical with " ' that included in the plaintiff's patent, the court " ' defines the patented invention as indicated by the " ' language of the claims; the jury judge whether " ' the invention so defined covers the art or article " ' employed by the defendant.'

" We perceive no error in the comments of the

" learned judge upon the question whether the plain-
" tiff's patent described a practically useful machine.
" Our conclusion upon this part of this case, there-
" fore, is that the question of infringement, arising
" upon comparison of the Royer patent and the ma-
" chine used by the defendants, should be submitted
" to the jury, with proper instructions as to the na-
" ture and scope of the plaintiff's patent as here-
" before defined, and as to the character of the de-
" fendant's machine."

In the leading case of *Mitchell* vs. *Tilghman,* 19 Wall., 118, we find the following apt language by Mr. Justice Clifford:

" Slight differences in degree cannot be regard-
" ed as of weight in determining the question of sub-
" stantial similarity or substantial difference, but in
" all cases the question whether the difference in
" degree is sufficient or insufficient to prove the al-
" leged infringement is a question of fact to be de-
" termined by the jury in an action at law, or by
" the court in a suit in equity."

In view of the foregoing authorities, it must be conceded by our adversaries that, if there was any evidence whatever on the question of infringement, there was no error in submitting the matter to the jury. We understand, however, their position to be that there was *no evidence whatever* of infringe-

ment, and consequently, that there was nothing to submit to the jury in that regard.

Of course, we understand the rule that when there it no evidence whatever on an issue of fact raised by the pleadings, the decision thereon ceases to be a question of fact for the jury, and becomes a question of law for the court, and in such case it is the duty of the court to direct a verdict. If, in a suit for infringement of a patent on a telephone, the plaintiff should produce as the infringing device a wheel-barrow, we apprehend that no court would go through the idle ceremony of submitting the case to the jury, but would peremptorily direct a verdict. And so likewise if the evidence showed without contradiction that the infringing act was not committed by a defendant, but by another person not a party to the suit, the same rule would obtain. In neither case would there be any evidence of infringement whatever. But where there is any evidence of infringement which, if uncontradicted, tends to show infringement, it is the duty of the court to submit it to the jury, and a failure to do so is error. Accordingly we address ourselves to this question:

Was there any evidence adduced by the plaintiff

which, if uncontradicted, tended to show infringement?

In making a motion to direct a verdict the defendant necessarily concedes the truth of all the evidence adduced by the plaintiff.

In *Parks* vs. *Ross,* 11 How., 362, this court held that the practice of asking an instruction to direct a verdict for defendant had superseded the ancient practice of demurrer to the evidence, and should be tested by the same rules. And in *Pawling* vs. *The United States,* 4 Cr., 219 (followed in *U. S. Bank* vs. *Smith,* 11 Wheaton, 117, and *Merricks Exrs.* vs. *Giddings,* 115 U. S. 300), this court, through Chief Justice Marshall, held that on a demurrer to the evidence "the party demurring admits the truth of "the testimony to which he demurs, and also those "conclusions of fact which a jury might fairly draw "from that testimony."

Therefore, when the defendant moved the court to instruct the jury in this case, it necessarily admitted the truth of all the testimony adduced by the plaintiff on the question of infringement, and also all conclusions of fact which the jury might fairly draw from that testimony. Did that testimony tend to show infringement, and was the jury justified in

drawing the conclusion of infringement therefrom? Or, to put it in another form, would all reasonable men, in the exercise of a sound discretion, necessarily draw from this admittedly true testimony the inference of non-infringement, or might they differ thereon?

The court of appeals put the question in this way:

"Whether or not it was error to refuse the in-
"struction depends upon *whether there was any evi-*
"dence of infringement, which, if credited by the
"jury, would have justified their verdict."

Singer Mfg. Co. vs. *Cramer,* 109 Fed. R., 654.

In this discussion we concede that there must be more than a mere "scintilla" of evidence, because the ancient "scintilla" rule is no longer good law, either in this or the English courts. It was so ruled in the English courts, in *Toomey* vs. *Railway Co.* (3 C. B. N. S., 150); *Jewell* vs. *Parr* (13 C. B., 916); *Ryder* vs. *Wombell* (L. R. 4 Exch., 36); *Giblin* vs. *McMullin* (2 L. R. P. C., 335); *Railway Co.* vs. *Jackson* (3 App. Cas., 903), and probably others.

This court adopted the same view in *Improvement Co.* vs. *Munson* (14 Wall., 442); *Pleasants* vs. *Fant*

(22 Wall., 216), and several others. We, therefore, disavow any reliance on the "scintilla" rule.

But one other remark before proceeding with a discussion of the evidence: Where a motion is made to direct a verdict, the court should consider not only all the facts which the evidence tends to establish, but "all such fair and reasonable inferences "of fact as the jury might lawfully draw from the "evidence."

This was ruled by the court of appeals of the seventh circuit in *New York Dry Goods Store* vs. *Pabst Brewing Co.*, 112 Fed. R., 381, and may be of some moment in the discussion to follow.

We now address ourselves directly to the matter in hand. The sewing machine art constitutes one of the great branches of the world's industries, and as a matter of interest, as well as an aid to a thorough understanding of the state of the art, we venture to preface our argument with certain historical facts. While they do not all appear in the record, they constitute a part of the industrial history of the country, and consequently, this court is entitled to take judicial notice thereof.

HISTORICAL REVIEW OF THE SEWING MACHINE ART.

The sewing machine art practically dates from the invention of Elias Howe, made in 1844. All prior efforts made in that direction had proved abortive. The earliest record we have of anything in the shape of a sewing machine proper is the English patent, No. 1764, granted to Thomas Saint in 1790. Prior thereto, and as early as 1755, embroidery machines had been patented in England; but of these we take no account, as they bear little relevancy to a sewing machine proper. The machine of Thomas Saint was a crude affair, and did not prove a success. In 1830 a patent for a sewing machine was granted to one Thimonnier in France, and about eighty of them were manufactured and put into use for sewing army clothes, near the close of the reign of Charles X, but they were destroyed by a mob, as many other labor-saving machines had been before. The inventor made a second attempt to popularize his machine, but these were destroyed by a second mob, and he barely escaped with his life, and died in poverty in 1857.

The first sewing machine built in the United States was that of Rev. John A. Dodge, a Methodist minister of Monkton, Vermont, in 1818. It was

never patented, and on account of the opposition of the journeymen tailors was abandoned.

Lye came next and secured the first sewing machine patent, in 1826. No records of this machine are extant, as they were all lost in the Patent Office fire of 1836. Hence we do not know what it was.

Between 1832 and 1835 Walter Hunt made a lock-stitch sewing machine, but abandoned it, and nothing ever came of his efforts in that direction.

In 1842 United States Patent No. 2466 was granted to J. J. Greenough for a sewing machine having a double-pointed needle with the eye in the middle, which needle was drawn through the work by a pair of traveling pincers. It was designed for sewing leather, and an awl pierced the hole in advance of the needle. This machine does not appear to have gone into any extensive use.

In the next year, 1843, United States Patent No. 2982 was granted to G. W. Bean for a sewing machine in which the needle was stationary, and the cloth was gathered in crimps or folds and forced over the stationary needle. None of the foregoing devices cut any figure in the art, and hence, may be dismissed from consideration.

This brings us down to 1844, which is the begin-

ning of the great epoch of the sewing machine. In that year Elias Howe commenced his work and made his first crude model. It is a matter of some interest to note that in the same year Thomas Hood published his famous "Song of the Shirt." It is not to be supposed that any relation of cause and effect exists between these two events, but it is probable that if Howe had begun his labors a year or two earlier, one of the great masterpieces of English literature would never have been written.

Howe was too poor to follow up his great invention at that time, but in 1845 he borrowed $500 from a friend, with which to build a machine, for which he agreed to give a half interest in his invention. The machine was completed in 1845, and in July of that year Mr. Howe sewed two suits of clothes on it, one for himself and one for his friend who contributed the $500. This furnishes the first instance in history of a suit of clothes made on a sewing machine. Notwithstanding this success, Howe met with great difficulties, the main one being opposition from the journeymen tailors. He improved the machine in many particulars, and built a second one, which formed the basis for a patent.

This patent was granted by the United States on September 10, 1846, and is numbered 4750.

It is commonly supposed that Howe's fundamental invention consisted in placing the eye in the point of the needle; but this is a popular error. The eye in the point of the needle had been patented in England in 1841, by Newton and Archbold, and had been used for at least eight years prior thereto, in the United States. The Howe needle was a curved one, and was carried at the end of a pendant vibrating lever, which had a motion similar to that of a pick-ax in the hands of a workman. The needle took its thread from a spool situated above the lever, and the tension on the thread was produced by a spring-brake, with a semi-circular end, which bore upon the spool, the pressure being regulated by a vertical thumb-screw. The work was held in a vertical plane by means of a horizontal roll or pin projecting from the edge of a thin metal plate called a "baster-plate," to which an intermittent motion was given by the teeth of a pinion. Above and a little to one side of said plate was the shuttle-race, through which the shuttle carrying the thread was driven by two strikers operated by two arms and cams located on the horizontal main shaft.

The machine contained no treadle, but was driven by a crank-wheel turned by hand.

The Howe machine as originally built bears but little resemblance to any of the modern appliances, but it embodies the three fundamental features of all practical machines, viz., the grooved needle with the eye in the point, a lock-stitch mechanism, and an automatic feed.

Unable to introduce the invention in the United States, Howe went to England with his machine, but met with no success there. On his return to the United States some years later he found that his invention had been taken up by infringers and that sewing machines embodying the same were being built and sold indiscriminately. This necessitated litigation. The infringers thought to break his patent by seeking to prove that the invention was anticipated by the abandoned experiment of Hunt in 1834, heretofore referred to; but in this they failed. The first two cases involving the patent were decided in 1851 and 1852, but are not in the reports. Those of which we have recorded reports are *Howe* vs. *Underwood* (1 Fish, 160); *Howe* vs. *Morton* (1 Fish, 586), and *Howe* vs. *Williams* (2 Fish, 395). Howe won all of his suits and the infringers were

compelled to pay a royalty of $25 on each machine. In six years these royalties increased from $300 to $2,000 per annum, and in 1863 the royalties were estimated at $4,000 per day. His patent expired in 1860, and was in that year extended by Congress for seven years. He applied for a second extension, which was denied. In his application for this second extension he admitted receiving $1,185,000; but claimed that the invention was worth $150,000,000.

In connection with the development of the sewing machine the name of A. B. Wilson, founder of the great firm of Wheeler & Wilson, stands next in rank to that of Howe. Wilson invented the rotary hook carrying a bobbin, which took the place of the reciprocating shuttle. This was patented to him June 15, 1852, as No. 9041. He also invented the still more important improvement of the "four-motion feed," which is the characteristic feature of nearly all practical family machines.

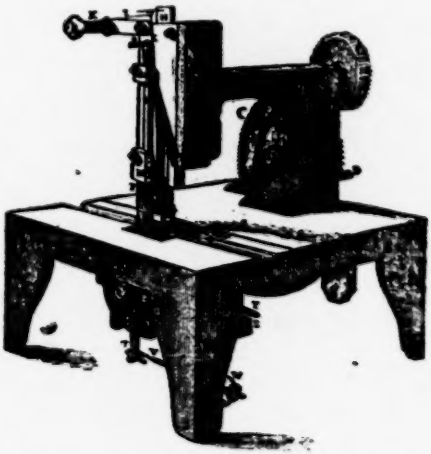
Contemporaneously with the Wheeler & Wilson machine came the Singer, patented August 12, 1851, as No. 8294, by Isaac M. Singer. Mr. Singer was an ingenious mechanic, and he entered into a contract to invent and build a new sewing machine for $40. This feat he accomplished in twelve days.

The characteristic feature of his machine was the vertical standard, with horizontal arm above the work table, which was afterwards adopted in nearly all of the other sewing machines. It is a valuable feature and is the prototype of the corresponding portions of the modern machine. Mr. Singer was the first in the art to apply to the sewing machine a treadle for actuating it by foot power in place of the hand-driven crank wheel; but he took out no patent for this feature. A cut of the original sewing machine is shown on the opposite page. The treadle is not shown, but is supposed to be connected with a pitman attached to the pin marked "D." The machine as shown in the cut is supposed to be placed on the top of a table, and the pitman, attached to the pin D, is extended downward to the bottom of the floor, where it is attached to a treadle. This treadle mounting was similar to that of an ordinary grind-stone. The operator stood upright and worked the treadle by one foot.

Following the Singer came the Grover & Baker, the Wilcox & Gibbs, the Weed, the Domestic, the Florence and others.

In 1856 the sewing machine manufacturers met at Albany, and by an agreement known as the "Al-

Original Singer Machine, 1851.



bany Agreement," all the then existing sewing machine patents were combined and formed into the famous "Sewing Machine Combination," which is perhaps the first instance in our history of a technical "trust." This trust included Howe, Wheeler & Wilson, Grover & Baker, and I. M. Singer & Co. The combined output of the trust for one-quarter of a centry, up to 1877, was over half a million machines per annum.

Of course many subsidiary patents were granted during that period of time, covering various parts of machines, such as hemmers, tuckers, fillers, quilters, binders, gatherers, rufflers, etc. But strange as it may appear, very little progress in the way of invention relating to the treadle was made prior to 1880. The fundamental patents on the machine expired in 1877, and although over seven thousand sewing machine patents have been granted by the United States, up to 1880 there were only two known methods in use for mounting the treadle. One method consisted in mounting it in the legs, and the other on the tie-rod by means of cones and set-screws. The only United States patent in this record relating to treadles prior to 1880 was that of Wilcox, of 1870 (Rec. 214) in which the treadle was mounted

on knife-edge bearings in the legs of the machine, which machine had no vertical double brace at all. It is a little singular that the advance in the art in the matter of treadle mountings was so slow, in view of the fact that the old treadle mountings prior to 1880 were so defective. Nevertheless, the fact remains, beyond all shadow of a doubt, that prior to 1880 the only treadle mountings known or in existence were the two which we have already referred to, and in both of them there was a known defect, apparent to all and crying loudly for a remedy. Cramer was the one who invented the remedy for that defect, which remedy consists in removing the treadle from the legs and the tie-rod and mounting it in the vertical double brace, where it could not possibly get out of line and would enable the machine to continuously run smoothly and without any binding. When once adjusted, this device remains so, practically as long as the machine lasts, and the constant annoyance of faulty alignment, with all its attendant evils, is obviated.

It may be that this fundamental invention of Cramer's, as shown in his patent, is not embodied in the most approved form of mechanism as viewed by the art of the present day. But this was the

case with all the great sewing machine inventions. Compare the cut of Singer's first machine, heretofore referred to in this brief, with the present improved Singer machine, and we learn an instructive lesson. It is almost impossible to recognize in the beautiful Singer machine of 1903 the crude and cumbersome device shown by the cut opposite page 36 of this brief. And yet the three fundamental elements of that cut are found in the present Singer machine, and beyond all question place Mr. Singer in the ranks of meritorious inventors, in respect to those three features of the machine. We think that Mr. Cramer stands in the same category regarding that feature of a sewing machine which he invented, and while he may not be entitled to as exalted a position in the art as Howe, Wilson and Singer, yet it cannot be denied that he must be considered a pioneer in regard to treadle mountings, and as such is entitled to great consideration.

We advance now to a more detailed consideration of the mechanism of a sewing machine in general, preparatory to a consideration of the Cramer invention.

MECHANISM OF SEWING MACHINES IN GENERAL.

A modern sewing machine consists of three separate groups of instrumentalities: A sewing mechanism, a stand, and a driving mechanism. Concerning the first of these there is no controversy in this case, as the patent does not relate to that part of the machine. The stand consists of a top, two side pieces (commonly called the legs), and a double vertical brace binding the two sides together and thereby forming a substantial frame-work. The driving mechanism consists of a treadle, a band-wheel, a pitman connecting the treadle and band-wheel, a driving shaft, and a belt connecting said shaft with the band-wheel. The power is applied by the foot of the operator to the treadle, which oscillates up and down on some kind of bearing or pivot; this causes a rotation of the band-wheel through the medium of the pitman, and the belt on the band-wheel drives the shaft attached to the sewing mechanism, through the instrumentality of gearing, and this causes the vertical reciprocating motion of the needle, whereby the sewing is effected.

These separate parts are manufactured at the central factory of the company and sent in a knock-down form to the various agencies throughout the

country, where they are assembled together for sale. Great care is required in assembling the parts in order to get them truly in line.

The Cramer invention relates particularly to the treadle. Prior to the date of his invention, which was June, 1880, a great many improvements had been made in the sewing mechanism and in other parts of a sewing machine, but very little if any, improvement had been made in the treadle, and Cramer addressed himself to that part of the machine. It is essential to the perfect operation of the treadle that its bearings should always remain in true alignment at a fixed distance apart. If these bearings should get out of line, the entire driving mechanism would be affected, and the machine would not act properly. The different parts would "bind," and the machine would run hard with a rattling noise.

Prior to the Cramer invention it was customary to mount the treadle either upon the tie-rod connecting the two legs together, or upon bearings placed in the two legs themselves. Cramer noticed that in both cases the bearings became loose from excessive wear and would not remain rigidly in line at a fixed distance apart. After much study on the

subject he conceived the idea of mounting the treadle directly in the vertical double brace instead of in the legs or on a rod connecting the legs together. That mode of mounting the treadle had never been adopted before, and Cramer was the first in the art to so mount a sewing machine treadle. In its broadest conception his invention consists in mounting the treadle in the vertical double brace by some kind of appropriate bearings.

THE CRAMER PATENT.

For the convenience of the court we herewith reproduce, on adjoining page, the drawing of the Cramer patent, slightly amplified in a few details in order to insure a clearer understanding of the same. The specification of the patent is as follows:

"SPECIFICATION forming part of Letters Patent No. 271,426, "dated January 30, 1883."

"Application Filed May 25, 1882. (No Model.)

"To all whom it may concern:

" Be it known that I, HERMAN CRAMER, of So-
" nora, in the county of Tuolumne and State of Cali-
"fornia, have invented a new and Improved Sewing
" Machine Treadle; and I do hereby declare that

Cramer Patent Drawings.

Fig. 1.

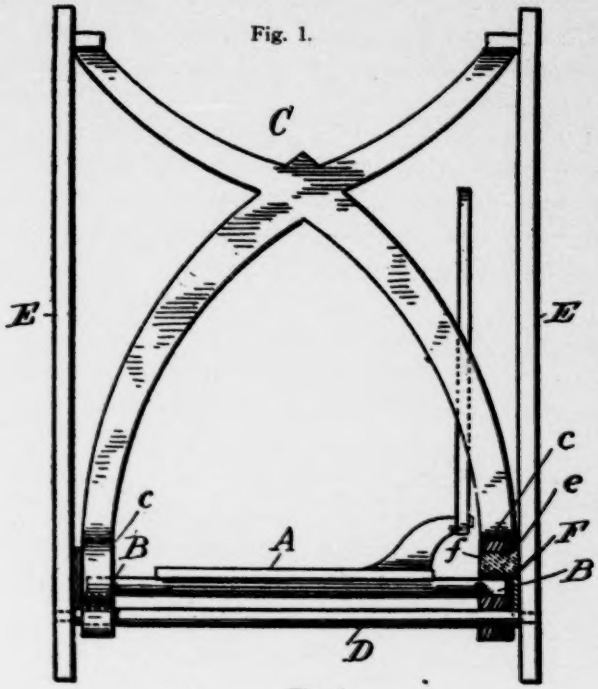


Fig. 2.

" the following is a full, clear, and exact description " of the same, reference being had to the accom- " panying drawings, forming part of this specifica- " tion.

" My invention relates to improvements in the " bearings of sewing machine treadles; and it has " for its object to provide means, first, to keep the " treadle-bearings rigidly in line and at a fixed dis- " tance apart to avoid friction, and, second, to make " its movement in use noiseless.

" To this end my invention consists in the construc- " tion and combination of parts hereinafter fully de- " scribed and claimed, reference being had to the " accompanying drawings, in which—

" Figure 1 is a perspective view of a portion " of a sewing machine, showing my invention. Fig. " 2 is a transverse vertical section through one bear- " ing of the treadle.

" A represents the treadle, provided with the usual " pitman connection by which to run the sewing ma- " chine wheel.

" B represents the two trunnions, cast as a portion " of the treadle and extending from its sides into " loop-holes in the common cast-iron cross-brace, C. " These trunnions are sharpened to an edge or cor- " ner along their lower sides, and the lower end of " the loop-hole is hollowed to an angle more obtuse " than the edge of the trunnion, to serve as a bearing " for the same and permit the rocking motion com- " mon to treadles.

" C represents the usual cast-iron double brace " connecting the two end legs diagonally in a plane

" generally vertical. The lower ends of this brace " are secured directly to the web of the legs by bolts " *d*, and for convenience and strength I make the two " ends of the common cross-bar, D, serve as these " bolts. The upper ends of the brace are secured, " as usual, either to the web of the legs or to the table " of the machine, near the legs.

" The treadle and its trunnion bearings are wholly " independent of the cross-bar D, except its service, " as stated, to hold the brace to the legs. The bear- " ing-holes in the brace are formed into long verti- " tical loops to permit the entrance of the treadle.

"Pieces of leather, F, or other soft material cover " the top and end of each trunnion, to serve as cush- " ions to keep the same close in its bearing, to pre- " vent the noise which would result were the trun- " nions permitted to bounce and thump endwise, " when the treadle is in motion. The leather F is " fitted to the curve of the upper side of the trun- " nion, which is an arc of a cylinder whose center of " oscillation is the lower edge of the trunnion. The " same leather also interposes between the end of " the trunnion and the adjacent iron. *f* is a block " serving as a mere backer, to which the cushion F " is attached. This block conforms to the back and " top side of the cushion and fills the loop-hole in the " brace above the trunnion. It also has tangs or pro- " jections *e*, resting in suitable recesses in the brace " C, which are held between the brace and the web " of the leg E, by which means the block and cush- " ion are held in place.

" Below the bearings of the trunnions B, I provide

"cups M, attached to the ends of brace C, to catch "the oil that usually drips from such bearings. By "this construction my treadle-bearings are rigidly "fixed, and in no way liable to get out of line or to "require adjustment. The usual noise is prevented "and overflowing oil is caught before it can do dam- "age.

"I am aware that sewing machine treadles have "before been provided with V-shaped bearings, and "I do not claim the same as my invention; but

"What I claim, and wish to secure by Letters Patent, is—

"1. The vertical double brace joining the legs "of the two ends of a sewing machine, provided with "holes through its lower extremities to serve as "bearings, in combination with a treadle provided "with trunnions fitted to oscillate in said bearings, "substantially as specified.

"2. The sewing machine legs E, the vertical "double brace C, secured thereto and provided with "holes to serve as bearings for the treadle A, and "the treadle provided with trunnions B to oscillate "in said bearings, in combination with the cushion "F and the block *f*, as and for the purpose specified.

"HERMAN CRAMER.

"Witnesses:

"FRANK W. STREET,

"CHARLES L. STREET."

The controversy in this case relates solely to claim 1 of this patent. The second claim thereof relates to the mufflers made of leather, or other soft mate-

rial, attached to the bearings to prevent noise, and is not charged to be infringed.

The statement of invention found in the specification is as follows:

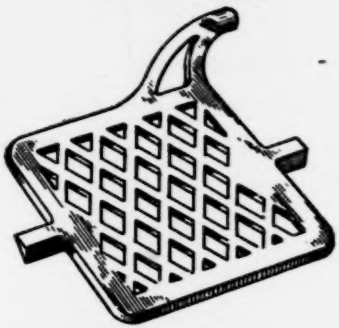
"My invention relates to improvements in the "bearings of sewing machine treadles; and it has "for its object to provide means, first, *to keep the "treadle bearings rigidly in line and at a fixed dis-"tance apart to avoid friction;* and, *second,* to "make its movement in use noiseless."

Claim 1 of the patent has reference to the first, and claim 2 has reference to the second of the above specified objects.

It will be seen from the patent that the Cramer treadle is provided with lugs or projections on each side made integral therewith, and that this treadle is mounted directly in the double vertical brace. The form of mounting shown and described consists of what is commonly called knife-edge bearings. A V-shaped hole or seat is made in the lower end of the vertical brace, and the under edges of the trunnions attached to the treadle are sharpened in the form of a knife-edge and rest in the V-shaped seats. As the treadle oscillates by the motion of the foot, the knife-edges rock back and forth in the V-shaped seats.

The Cramer invention does not relate to the particular form of bearing used, for he distinctly states in his patent that he does not claim the knife-edge bearings, inasmuch as that form was old in sewing machines at the date of his invention. The following cut will clearly show the specific form of Cramer's treadle described in his patent:

Cramer's Treadle.



The claim which he does make reads as follows:

"The vertical double brace joining the legs of the "two ends of a sewing machine provided with holes "through its lower extremities to serve as bearings, "in combination with a treadle, provided with trun- "nions, fitted to oscillate in said bearings substan- "tially as herein described."

The proper construction of this claim is dependent upon the scope of the actual invention made, in view of the state of the art. It will be necessary,

therefore, to advert to the prior art as it existed at the date of the Cramer invention, and the first point for consideration will be the actual date of that invention.

DATE OF THE CRAMER INVENTION.

The date of the Cramer invention is June, 1880. This must be taken as a fact proven beyond all doubt. Cramer testifies that in the middle of June, 1880, he "had the thing all built in perfect models, " perfect working models, just as perfect as they are " to-day." (Rec., 40.) He began making and selling the machines in 1881, the first one put on the market having been made at Sonora in January, 1881. (Rec., 41.)

Mrs. E. S. Abbott corroborated this testimony and produced and put in evidence several cardboard models embodying the invention, bearing on them the date June, 1880, in Cramer's handwriting. She testified that in June, 1880, under the direction of Mr. Cramer, she made those models for him. They were put in evidence and marked "Plaintiff's Exhibit T." (Rec., 153-4, 157.)

Mr. Cramer also testified positively as to the making of these models in June, 1880, saying that they

were made at that time and the inscription was written on them at the same time. (Rec., 192.)

No attempt whatever was made to contradict this testimony. But even if there had been, the motion of defendant for a verdict would necessarily concede the truth of Cramer's testimony on this writ of error. Consequently, it must be taken as a proven fact that the date of the invention was June, 1880.

Starting with June, 1880, as the date of Cramer's invention, what was the state of the art at that time?

THE STATE OF THE ART.

There is not a pretense of dispute on this point, for the record shows conclusively that prior to said date sewing machine treadles had been mounted in two, and only two, ways, viz: in the legs and on the tie-rod usually connecting the legs. The oral testimony on this point is clear and convincing.

Cramer testifies to it at pages 38-41.

Expert witness L. W. Seely testifies to it at page 120.

Expert witness A. C. Brown, with a practical experience of twenty-seven years in the sewing machine business, testified to the same effect at pages 160-1.

Herman Cramer, Jr., testified on the subject at pages 175 *et seq.*

All of this testimony must be taken as true. The testimony of the defendant's witnesses shows that practically all the sewing machine companies in the United States were mounting their treadles either in the legs or on the tie-rod prior to June, 1880. Not one of them mounted the treadle in the vertical double brace.

The defendant company mounted its treadles in the legs of the machine at that time. (Rec., 291.) It was not until after the date of the Cramer patent that they changed this mounting to the double vertical brace.

It will be necessary to examine a little more in detail these two old styles of mounting, which constituted the prior art.

The principal one of these two was the mounting on the tie-rod. This rod, used as a tie or brace, usually connected the two sides or legs together and also served as a seat for the treadle. The most usual way was to cast the treadle with a lateral groove through its center and a boss, hub or projection at each end of the groove, with a hole through the same, which hole was funnel-shaped at the outer end, as represented

by the cuts following, made from plaintiff's exhibit E, which represent the treadle removed from the tie-rod, one being a perspective view and the other a vertical cross-section.

Old Style Treadle With Cones and Rod Removed.

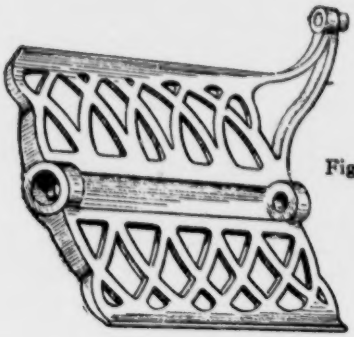


Fig. 1.

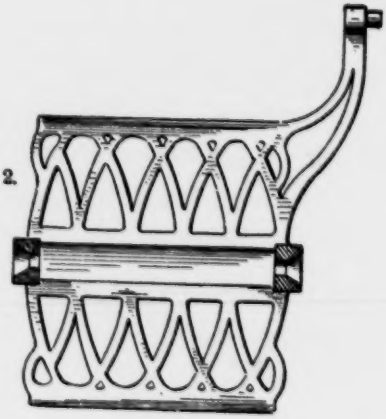


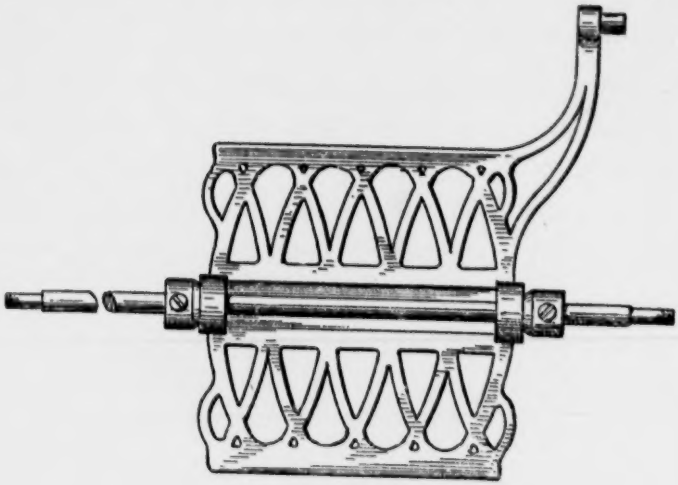
Fig. 2.

This treadle was strung on to the tie-rod. That is to say, the rod was passed through the two holes in the bosses and lay snugly in the groove of the treadle. Conically pointed collars with set-screws styled in the art "cones," were then made of the following form:

Cones.

After the treadle was strung on to the rod and placed in the proper position, these conical collars were passed over the rod at each end and their conical ends were fitted snugly into the countersinks of the holes in the bosses of the treadle, after which the set screws were tightened, so as to hold the treadle in position, as represented by the following cut:

Old Style Treadle.
Cones in Place.



This treadle oscillated on these cones as bearings.

This construction was liable to serious objection. The constant oscillation of the treadle would cause the face of the cones to wear away from friction, and the set screws holding the cones in place would get loose. The result would be that the treadle bearings were no longer rigidly in line and the treadle, being loosened from its bearings, would slip endwise on the rod at every impulse, thereby causing the different parts of the driving mechanism to get out of line, and the machine to "bind" and run "hard." At the same time an incessant rattling noise was pro-

duced by the slipping of the treadle back and forth on the rod. When this result was reached it became necessary to loosen the set screws, move up the cones to a new position and fasten them there by tightening the set screws. The machine would then work until the cones and set screws again wore loose, when the re-setting operation would have to be repeated. Finally, when the cones wore to such an extent that they could not be re-set, they were thrown away and a new set provided. The re-setting of these cones was a delicate operation, requiring great care and judgment. If they were set too tight the treadle would not oscillate, and the cones themselves were liable to crack. If they were not set tight enough, the treadle would slip and rattle, causing the troubles referred to above. Hence it required somewhat of an expert to set and re-set these cones correctly. The average operator of a sewing machine is not such an expert.

A modification of this form of mounting was sometimes used, shown in the cuts on adjoining page.

In this method the cones are dispensed with and a collar having a V-shaped loop is substituted. The ends of the treadle rod are knife-edged and they are fitted into the V-shaped seats, thereby presenting the

Old Style Treadle Mounted on Rod With Knife-Edge Bearings.

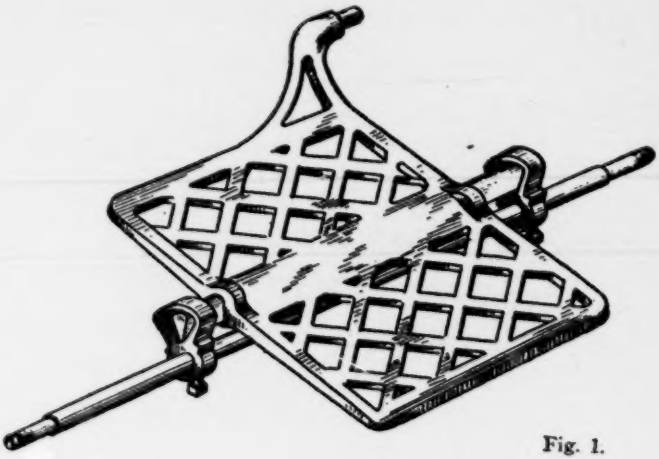
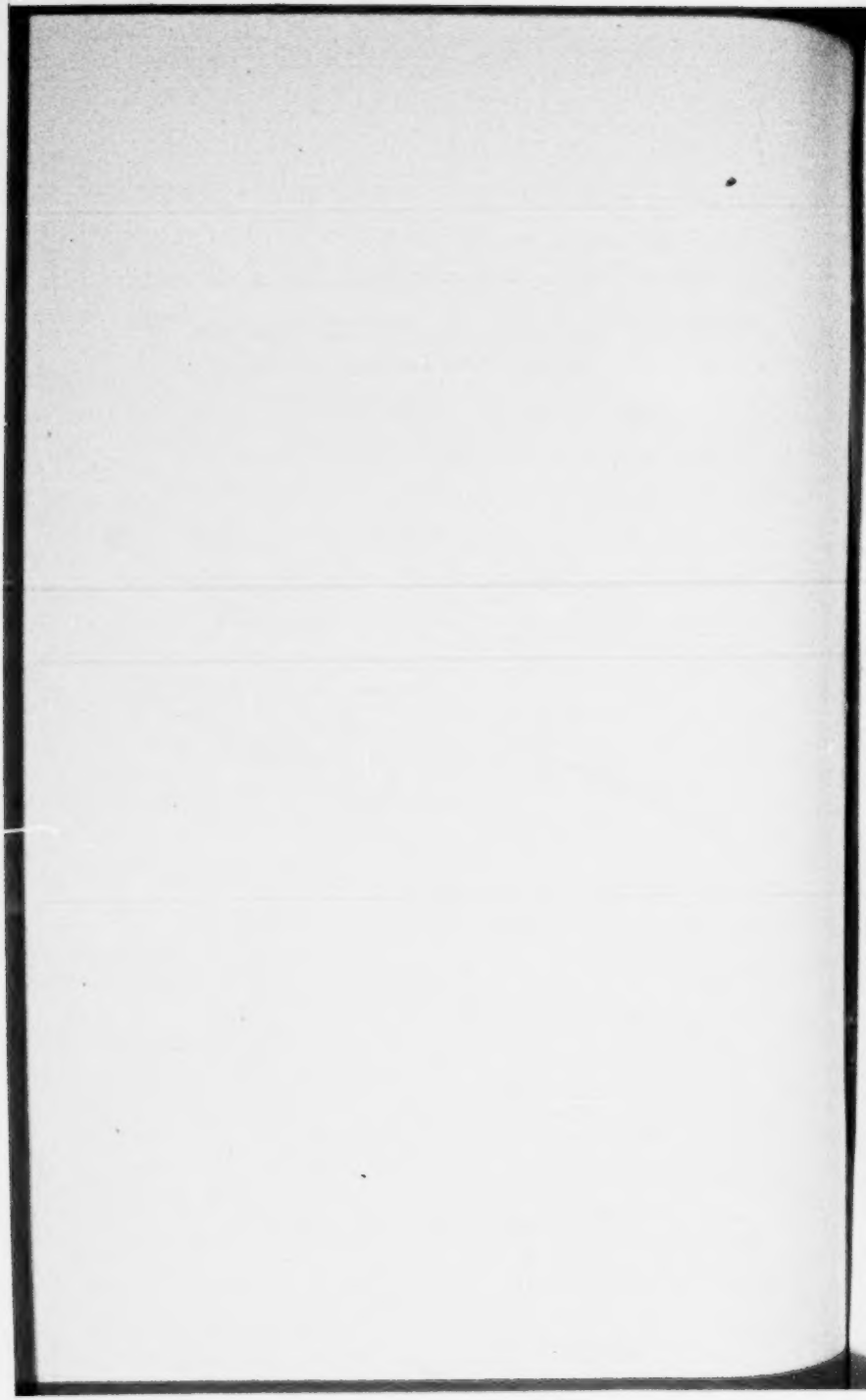


Fig. 1.

Fig. 2.



case of a treadle mounted by knife-edge bearings on the tie-rod.

This form of mounting was liable to the same objections as that of cones and set screws. In fact, it was even inferior and possessed some defects not inherent in the cone and set screw method.

This second method of mounting the treadle, to wit: in the legs or side pieces, is illustrated in the Wilcox patent of 1870. (Rec., 214.) It was liable to very serious objections.

The constant downward pressure on the treadle has a tendency to cause the legs to spread apart, and as soon as that occurs the parts get out of alignment. If, however, the legs should be so tightly braced as to resist the tendency to spread, then the treadle rod itself would tend to bend downward, thereby becoming crooked and causing the machine to bind and run hard.

An illustration of the bending of a treadle rod by pressure of the foot was furnished by defendant's witness Jackson, who produced an old treadle-rod bent entirely out of shape by the constant pressure of the foot on the treadle. (Rec., 304.)

The mounting of the treadle in the legs was quite as objectionable as mounting on the tie-rod; for,

while it did away with the cones and set screws, it caused the other defect of spreading the legs, which always results in throwing the machine out of alignment and causing it to run hard and to bind.

The record furnishes plenary proof of the foregoing, as will be seen by the following references. Herman Cramer testified as follows:

"I kept experimenting on machines continually. "* * * I noticed that if I could only overcome "that difficulty of the treadle, it would be a fortune "to me. In fact all the machines had that trouble. It "(the treadle) would continually get loose and out "of line and the action of the foot would spread these "legs, and when spread, they would flop on the bar "backwards and forwards. (Rec., 38.) When this "treadle worked backward and forwards on this "rod, it would spread the cones and work them "loose. They were continually working loose. "That was the style of making the treadle "that was in use prior to the time I got my inven-"tion. (Rec., 39.) The bearings would get loose "in the side of the legs and turn over. They would "not stay in line; they would work out of line, never "in line—they would work loose from the screws "that held them to the bar. There was more diffi-"culty in that direction than anything about a sew-"ing machine—it gave me more trouble than any-"thing else. That difficulty was common to all sew-"ing machines I knew of at that time . (Rec., 40.) "When the treadle worked backward and forwards

"on the rod, it would spread the cones and work "loose. They were continually working loose." (Rec., 39.)

The plaintiff's expert witness, L. W. Seely, testified as follows:

"Before the time of Mr. Cramer's invention it was "usual to mount these treadles upon a tie-rod which "extended across between the legs at the bottom, and "in order to provide a bearing for the treadle, col- "lars of cone-shape were mounted on this rod, "which engaged with sockets in the end of the "treadle, and these collars were held in place by set- "screws, which are simply screws passing through "the collar and bearing upon the rod. The treadle "did not oscillate upon the rod directly, but upon "these collars. The bearing is not upon the rod, but "upon the cones, and the construction is the same at "both ends of the treadle. If these cones are prop- "erly placed and are held tightly in position, the "treadle will rock upon them and operate correctly. "But any collar held by a set-screw on the shaft is "liable to work loose when the part which moves "upon it is subjected to long continued use or oscil- "lation. And as soon as these collars work loose the "treadle becomes loose, rattles, shakes endwise, and "the bearings are no longer at a fixed distance apart. "That was the common style of treadle bearings pre- "vious to Mr. Cramer's invention. Treadles were "also mounted in the legs of a sewing machine by "any suitable kind of bearing, such as point-center "bearings, mounted directly in the legs. In that

" case the operation of the treadle had a tendency to " spread the legs, in which case the fit of the bear- " ings would no longer be accurate. In other words " they would be out of alignment and the treadle " would run hard and wear the bearings unequally." (Rec., 120.)

Plaintiff's expert witness, A. C. Brown, testified as follows:

" I have been connected with sewing machines in " one way and another about twenty-seven years. I " have been connected with the Domestic Company, " Wheeler & Wilson, the Singer Company, the " White Company, and the New Home. During " that time I have had occasion to examine very " much into the modes and operation of different " styles of sewing machines. I have become quite " familiar with all the mechanism of a sewing ma- " chine. I was connected with the Singer Sewing " Machine Company from 1887 to 1890. Prior to " the year 1880 the treadles of sewing machines were " mounted on a rod usually with cones at the end of " the treadle. The treadle worked on cones, the " cones being on the rod, the cones were held in place " on the rod with a set-screw. The cones were fitted " into a socket made in the treadle to conform to the " same shape as the cones. The end of the collar was " cone-shape that fitted into a socket in the treadle, " and that cone was held in position by a set-screw. " There was a great deal of difficulty in that style " with regard to keeping the treadle bearings in per- " fect alignment. First, the set-screw would become

"loose from working. That would necessitate clos-
"ing this up and taking up the lost motion. This
"being more or less worn loose on the rod, as most
"of them were, it would throw it out of alignment
"on account of it being thrown to one side, or prob-
"ably not in the same place that it originally had
"been. When those things got out of alignment the
"result was heavy running and noisy. The noise
"would be occasioned by lost motion, and the heavy
"running would be caused by friction, uneven bear-
"ings. I noticed that defect in that style of machine
"very decidedly. It was a thing we had a great deal
"of trouble with, always tightening that up. The
"only thing to do was to loosen that set-screw, push
"it up and take up the loose motion for the time
"being; but it would soon get loose again. It was a
"constant source of annoyance, that is my experience.
"I had considerable experience in that line. Anoth-
"er kind of mounting for the treadle at that time
"was a kind of knife-edge bearing. The knife-edge
"would be on the treadle and that would be set on
"the rod, held in its place by something very similar
"to this cone, a sort of a collar. When they got
"loose they would be noisy and out of alignment. It
"would make it noisy and hard running. In all
"these machines the treadle was mounted on the tie-
"rod that tied the two legs at the bottom." (Rec., 160-1.)

Plaintiff's witness, Joseph E. Lawlor, testified as follows:

"I am in the sewing machine business since 1875.

" Until the 14th of last October I was connected with " the Singer Company. When I began in 1874 the " treadle was mounted with cones on a rod running " across from one stand to the other, the tie-rod " which held the legs together. The cones were held " in place by a kind of screw that held the treadle in " its place. These cones would loosen all the time. " The treadle was wearing on this rod, consequently " it would get loose and therefore our difficulty was, " we would be called on to tighten those. The treadle " was always moving up and down, making a good " deal of noise. When the cones got out of order we " would unscrew them and place them in against the " treadle so as to hold it tight. As fast as they be- " came loose that way we would have to readjust " them. When they got loose and wore that way " they caused a rattling noise. It had not the steady " motion that the new treadle has. It has a kind of " jerky motion. To give you an instance, one day I " was in Santa Rosa trying to sell a sewing machine " to a doctor's sister. I was talking the merits of the " Singer sewing machine when the doctor came in. " He told his sister not to have anything to do with " the machine because it was not steady. She was " not a very healthy lady—delicate. I told her of " the steady ease of the new Singer, and he put his " foot on the improved treadle and he found it was a " very easy, soft motion, and he told her she might " buy it. That was one of the new patent treadles " (Diehl's). If it had been this old treadle (cones " and set-screws) I do not believe he would have let " her take it. (Rec., 185.) The next treadle mount-

"ing adopted by the Singer Company, after they "stopped the use of cones and set-screws, was to "mount the treadle in the legs. They used that "style of mounting probably three or four years. It "gave still that short jerky motion. It had not the "easy, soft motion of this other treadle (Diehl's). "In the next one they adopted they mounted the "treadle in the vertical brace. That was a great im-"provement. They have not changed from that "style of mounting up to the present time. They "have had three styles of mounting; first, in 1874, "they mounted the treadle on the rod that connected "the legs together. That they found objectionable. "Afterwards they mounted the treadle in the two "legs of the machine, which also was found objec-"tionable. Afterwards they mounted the treadle in "the vertical brace and have kept it there ever since. "That was the development from one to the other. "The last one they got they called the improved "treadle. They still have it on the market to-day. "That gives good satisfaction. I have probably sold "for the Singer Company a thousand or more ma-"chines with that style of improved treadle mount-"ing. The Singer Company advertises that up to "date they have sold over 16,000,000 machines." (Rec., 188.)

Plaintiff's witnesses Herman Cramer, Jr., (Rec., 175-6), and Mrs. E. S. Abbott, (Rec., 155), likewise gave valuable testimony on this subject.

We submit, therefore, that this record shows that prior to the date of the Cramer invention in 1880 the

only two methods used for mounting a sewing machine treadle was either on the tie-rod, by means of cones and set-screws, or directly in the two legs of the machine, and that both of these methods were liable to the most serious objections, thus presenting a known defect in the art to be solved by some one's inventive genius.

Only one word more concerning the state of the art. The defendant put in evidence, for the purpose of showing the state of the art, the following exhibits:

U. S. Patent to Wilcox, of 1870. (Rec., 214.)
Eng. Patent to Bourdin, of 1874. (Rec., 202.)
U. S. Patent to Donovan, of 1881. (Rec., 208.)
U. S. Patent to Lawler, of 1882. (Rec., 216.)
U. S. Patent to Gregory, of 1882. (Rec., 212.)
Geo. P. Bent, device of 1881. (Rec., 223, 230.)

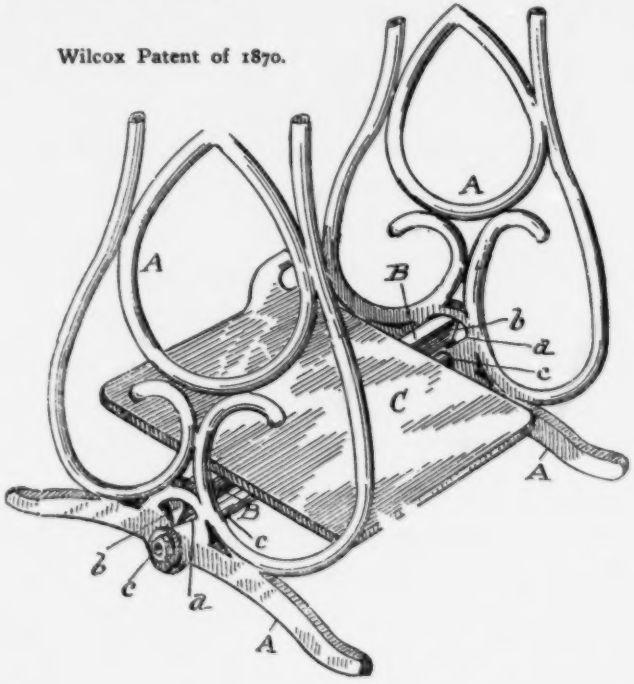
Concerning these exhibits only the first two, Wilcox and Bourdin, have any relevancy to the issues here, because they are the only ones early enough in time. Cramer's invention was completed in June, 1880, as shown conclusively by the record. Consequently, the patents of Donovan, Lawler, Gregory, and Bent, all of which were subsequent to June, 1880, must be dismissed from consideration. They are

not *prior,* but *subsequent* devices. This leaves only the Wilcox and Bourdin patents, concerning which we say a word.

WILCOX PATENT OF 1870.

The drawings of this patent are very obscure, requiring a magnifying glass to be accurately read. In order to lessen the labors of the court in that regard and aid it in interpreting the patent, we have produced below an illustrative drawing of the Wilcox patent, which shows the device more clearly than the patent drawings.

Wilcox Patent of 1870.



It will be seen that the frame has no vertical double brace at all, but consists simply of a top, two sides (or legs) and a tie-rod connecting the legs. Just above the tie-rod the treadle is mounted in the two sides, or legs, by means of knife-edge bearings. The treadle C is secured to a bar or rod B. This bar is formed at each end into a triangular knife-edge projection *b*, which fits into V-shaped bearings *a*, made in the lower part of the sides, or legs, A. This construction is nothing more than a treadle mounted in the legs on knife-edge bearings, and is liable to all the objections pointed out by the witnesses as inherent in the mounting of treadles in the legs of a sewing machine. It is substantially the same kind of mounting (except that knife-edges take the place of point-centers) used for a time by the Singer Company prior to Cramer's patent, and discarded after the issue of that patent, when they adopted the Cramer method of mounting in the vertical brace. The fact that this Wilcox patent shows knife-edge bearings does not in any way affect us, because we freely admit that knife-edge bearings were old, and the Cramer specification distinctly and unequivocally disclaims them as any part of his invention. His invention consists in mounting the treadle in the verti-

cal brace by some kind of appropriate bearings, whether they be knife-edge, point-center, pin, or other kind. He illustrates the knife-edge as the kind he prefers to use, taking care to say that they are no part of his invention. We cannot see how the Wilcox patent can affect the fundamental issue in the case, which may be thus formulated: Granted that the only known methods of mounting sewing machine treadles prior to June, 1880, were on the tie-rod and in the legs by some kind of appropriate bearings, was it any invention on Cramer's part to mount such treadles in the vertical brace by the same kind of old bearings?

BOURDIN'S ENGLISH PATENT.

The drawings of this patent are likewise very obscure and difficult of comprehension, especially since the part relied on by our adversaries *is not described in any way, shape, or form in the specification.* Under these circumstances we have employed the most skilled draftsman on the Pacific Coast to spell out the construction of the patent, and then illustrate it in drawings which one can comprehend.

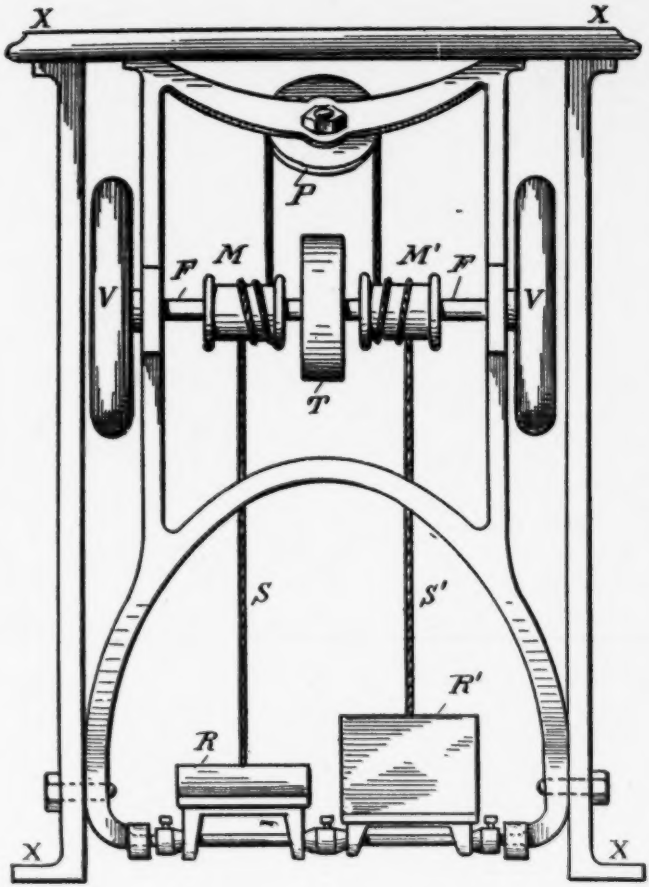
In doing this we have been more than fair to our adversaries, because, if there is any proposition of patent law well settled, it is that an anticipatory de-

vice, to be of any effect, must disclose on its face the patented invention, and cannot be aided by surmise or conjecture as to what was intended. It must disclose the patented structure by apt description. Waiving that point for a moment, permit us to consider the Bourdin patent in the light of what it may possibly have been intended to show.

On the adjoining page is a cut showing the Bourdin machine.

This machine shows a double vertical brace, having its lower ends extending outward at an angle to the frame. These two ends are connected by a tie-rod, which is securely riveted into the ends of the brace, and is substantially the tie-rod shown in Diehl's machine, except that it is riveted to the brace instead of being made integral therewith.

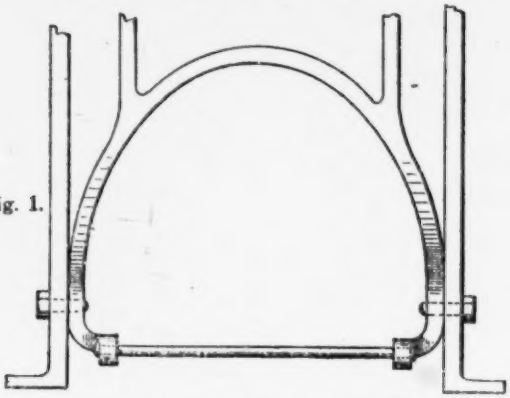
Bourdin's English Patent.



The following cuts show the lower end of the vertical brace and the tie-rod. Figure 1 is a front view and Figure 2 a side view. The end of the vertical brace is curved outwardly and the tie-rod is riveted into the two ends of the brace.

Detailed Views Bourdin's Eng. Patent

Fig. 1.



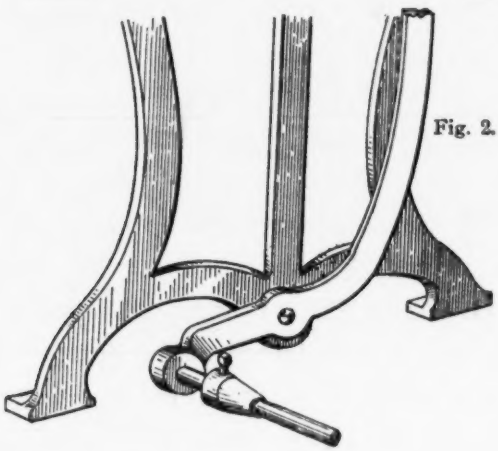
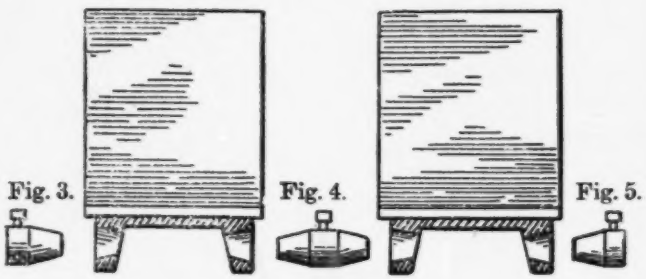
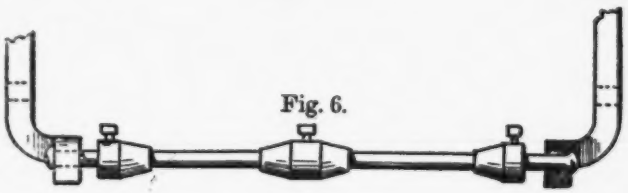


Fig. 2.

Two treadles are mounted on this tie-rod by the old-fashioned method of cones and set-screws. The treadles are not mounted in the vertical brace, but on the tie-rod, and it is purely an adventitious circumstance that this tie-rod is riveted to the vertical brace instead of to the legs. The following cuts il-





lustrate the idea. Figures 1 and 2 show the treadles disconnected, and Figures 3, 4 and 5, the cones and set-screws. Figure 6 shows the tie-rod with the cones in place, but the treadles removed. Such a mounting of the treadles is liable to all the objections heretofore adverted to. The set-screws will get loose and

the cones will wear away by friction. Then the treadles becoming loose, will slip endwise back and forth on the rod, causing a rattling noise, uneven running, and binding. When the cones wear out, then the rod must be unriveted and cut out, and a new one put in, an operation which must be performed by a mechanic. In this regard the construction is inferior to any we have considered.

Furthermore, the machine is utterly impracticable and has never gone into use. It has two treadles, one for each foot. These treadles have no pitman, but are connected by flexible cords to winding drums on the power shaft. When one treadle is depressed, the other is elevated, and *vice versa,* one drum winding while the other unwinds. In this way a continuous rotation is given to the shaft. The machine cannot be operated by one foot, which is the usual way of operating a sewing machine in a factory where the operator stands while running the machine, using one foot to steady himself and the other to operate the treadle. It is apparent at a glance that this machine is utterly impracticable.

Mr. Cramer testified of the Bourdin model, as follows:

"The treadle upon this model is mounted on "a rod that is held by cones and set-screws; the

"mounting of those treadles on the cones and set-
"screws does not differ any from the old way of
"mounting them on cones and set-screws, about
"which we have had so much testimony; there is no
"alignment to it all; besides you have to put down
"one foot and then the other foot; you do not work
"with one foot; in addition to that, it is upon a
"hinge, like a door, or like the tail-board of a wagon,
"and is not an oscillating treadle at all; it is wholly
"impracticable and a useless contrivance. I do not
"think there was ever a single one like it in the
"United States; you could not work that with one
"foot. I, being lame, could not work it at all; it is
"not oscillating; there is a rope that you have to
"pull up and down, and you have to keep a steady
"tension on one side to work the other side; if those
"cones were to wear and the set-screws get loose, you
"would have to put on new cones if they burst; if
"that happened, you would have to saw the whole
"thing apart and put in a new rod and new cones;
"if those cones were to wear and the set-screws get
"loose, they would flop from side to side; they would
"slide horiontally on the rod; that style of mount-
"ing the treadle would be liable to the same objec-
"tion as the old style of cones and set-screws." (Rec., 383-4.)

Plaintiff's witness, A. C. Brown, testified on the subject as follows:

"I see two treadles here mounted on a rod in the
"old style way, cones with set-screws in them fast-
"ened to the rod in the regular old way of mount-

"ing a treadle on a rod (Rec., 387); it is one and "the same thing, as I testified here before; they are "put on a rod and held in place by those cones with "set-screws in the cones to hold the cones to the rod, "just the same thing as what I testified to in the old "style treadle fastened to the rod—the same objec-"tion. I never saw anything of this kind in prac-"tical use; I don't see anything practical about it; "I am using sewing machines every day, and I could "not use that at all; I could not use it simply be-"cause I use one foot; you may say why do I not "use two feet, I say because I need the other foot on "the floor to steady my body; there are a great many "use one foot and it is also practical to use two; it is "common to run a sewing machine with one foot, "very much so; I should say more than half the peo-"ple run a sewing machine with one foot; I have "been in the sewing machine business for a number "of years and am familiar with all styles of sewing "machines that are being sold and have been sold for "a number of years past; I never saw a sewing ma-"chine on the market or in use anywhere similar to "the one that is exhibited by this model; there is no "rigid pitman rod in this machine; there are strings "here or rods; they are intended to operate the "treadle, a sort of pulley arrangement; that would "be getting out of order; those rods would be "stretched and have to be adjusted and it would be a "constant source of annoyance all the time; I posi-"tively could not use any such treadle as that." (Rec., 388.)

Plaintiff's expert witness, L. W. Seely, testified concerning the Bourdin model as follows:

"Inasmuch as the treadles are mounted upon a "rod, or rather upon cones upon a rod, they are sub- "ject to all the disadvantages which I have pointed "out before as necessarily attaching to such a con- "struction; I find a disadvantage also in the form of "the treadle and the connection with a sewing ma- "chine mechanism by means of cords; the invention "in this case of Bourdin did not apply to the tread- "les, it was a means of driving the shaft above the "pedals; on the shaft are two separate oscillating "sleeves with a clutch inside of each; therefore in "order to drive them alternately and always revolve "the shaft in the same direction it is necessary to use "two shafts upon the rod and to connect those "treadles by a flexible cord or band to these two "sleeves. In operating the machine, in depressing "one treadle the other one is pulled up, and it is "necessary not only to operate the sleeve as each "treadle is depressed, but also to pull up the "treadle, the connection between them being a flexi- "ble one. This device requires two treadles. Those "sleeves on the driving shaft are so arranged that "one of them moves in one direction and the other "moves in the other direction alternately; they are "pulled back and forth on the shaft, but there is a "clutch in each one that alternately takes hold and "lets go; that gives a continuous motion to the shaft, "produced by the alternating oscillations of the two "treadles; I do not find in the Bourdin patent any

"description of the treadle mountings at all; the "treadles are not described in the patent; I find in "the Bourdin patent an improved clutch mechanism "for operating a shaft; I find no description of the "treadle mountings in the patent, no description "whatever; I presume that form of treadle mount- "ing was old at that time; the patent contains no de- "scription whatever of the treadle; all I find there "is a figure or drawing in that regard; there are two "treadles; there is a single pointed cone and set- "screw outside of each treadle, and another cone and "set-screw between the two treadles, forming a bear- "ing between them both, upon the inside; but they "are the same cones and set-screws, secured to the "rod in the same way as has been used for many "years in sewing machines." (Rec., 393.)

The above quoted testimony was not denied, nor was any attempt at denial thereof made. It stands before this court upon this hearing as admittedly true, and we think it is amply sufficient to dispose of the Bourdin patent.

And finally, as remarked above, there is no description whatever of the treadle mounting contained in the Bourdin patent. All that it shows in that regard is a drawing without any verbal description whatever. We have already shown that this drawing is not clear, and in order to make it clear have been compelled to produce an illustrated draw-

ing from a skilled draughtsman. But even if the drawing had been sufficiently clear to enable any person to understand it, it would not be sufficient for the purposes of anticipation in the absence of any verbal description. A drawing alone and unaided cannot anticipate. This point is sustained by the following authorities:

New Process Co. vs. *Koch,* 21 Fed. Rep., 580.
Briton vs. *White Man. Co.,* 61 Id., 95.
Reeves vs. *Bridge Co.,* 5 Fisher, 468.
Parsons vs. *Colgate,* 15 Fed. Rep., 600.
Robinson on Patents, Section 325.

and is in accord with the general rule laid down by this court in *Seymour* vs. *Osbourne,* 11 Wall., 555.

In view of the foregoing, we submit that the Bourdin patent does not show a treadle mounted in the vertical brace, but only treadles mounted on the tie-rod by means of cones and set-screws in the old-fashioned manner; that such mounting is liable to serious defects, and that the Bourdin machine is utterly impracticable and inoperative, for which reason it can have no effect on the Cramer invention.

But, whatever the Bourdin patent shows, that was a question of fact for the jury to pass on. They did

pass on it, and their decision in that regard cannot be reviewed in the appellate court.

Having now clearly in mind the state of the art, this court will be prepared to determine the proper construction of Cramer's claim. We shall discuss the question from several different points of view, as indicated by the following synopsis:

CONSTRUCTION OF CRAMER'S CLAIM:

1. *In view of the state of the art.*
2. *In view of the statute prescribing the form of claims.*
3. *In view of the technical language of the claim.*
4. *In view of the file-wrapper contents.*
5. *In view of Judge McKenna's decision in* Cramer *vs.* Fry.

Taking up these points *seriatim*, we contend:

1. CRAMER'S CLAIM IS ENTITLED TO A BROAD CONSTRUCTION, IN VIEW OF THE STATE OF THE ART.

It is our contention that this claim covers a broad generic invention, which consists in mounting the treadle directly in the vertical double brace by any kind of appropriate bearings.

It cannot be denied that this record shows conclusively that Cramer was the first in the art to so mount a treadle. Prior thereto the treadle had been mount-

ed on the tie-rod or in the legs, sometimes by knife-edge bearings, sometimes by point-center bearings, but generally and usually by cones and set-screws.

It is equally clear that all those former styles of treadle mounting were liable to serious objection, and constituted a known defect in the art loudly calling for a remedy. Many efforts had been made to remedy the defect, without success. Cramer did remedy it, and this he did by mounting the treadle in the vertical double brace. That was his fundamental idea. In carrying it out, it was necessary to make use of some kind of a bearing for the treadle to oscillate on, and he selected from the then existing art that form of bearing which he considered best suited for his purpose, to wit: the knife-edge. He made no invention in the bearing itself. He might have adopted plain round journal-bearings, or point-center bearings, or any other kind; but what he did adopt was the knife-edge, because he considered that the best. In order, however, that no one might be misled, he distinctly states in his specification that such bearings were old and he did not claim them as any part of his invention. This goes a long way towards sustaining our contention as to the generic character of the invention.

It is clear from the record that the mounting of the treadle in the vertical double brace, whether by knife-edge, point-center, pin, or other form of bearings, remedied the known defect in the art, which Cramer was striving to overcome, and made a perfect treadle-mounting. It was a most valuable contribution to the art, and the evidence on this point is overwhelming. Indeed it is necessarily conceded by the motion to instruct the jury.

Permit us to advert briefly to some of the undisputed evidence on this point.

The expert witness, A. C. Brown, a sewing machine man of twenty-seven years experience, who formerly worked for the Singer Company, after stating the defects of the tie-rod mounting, testified concerning the Cramer invention as follows:

"The brace being all in one piece, there is no "chance of its getting out of place, and the treadle "will always be in alignment, always will be in its "proper position and place; it overcame very de- "cidedly the defect I spoke of, those cone collars on "the rods connecting the two legs (Rec., 162), from "the fact that this treadle is hung here in the brace "on the bearings there is no possible chance of its "getting out of alignment, from the fact that the "brace is constructed of one piece, no joints in it, "and if the leg gets one way or the other it would

" not put the treadle out of line; there are no cones to " get loose on a rod, no collars to get loose on a rod; " and the greatest advantage is, that it keeps it al- " ways in its proper place, in perfect alignment, " from the fact of its being hung in one solid piece " of metal (Rec., 163); it would overcome the de- " fect, as it would do away with the lost motion " caused from those cones on the tie-rod; the new " advantage, the greater advantage, I suppose that " would be the new feature, would be to get a per- " fect alignment, doing away with the possibility of " lost motion, do away with constant adjustment, and " by the construction it makes it more possible to be " lighter running than heretofore; the particular " construction is, the treadle being hung in the " brace, it is bound to be in the proper position and " it is not possible for it to get out of alignment, " which it would in the old way, as already ex- " plained; prior to June, 1880, I had never seen, " known, or heard of machines in which the treadle " was hung in the vertical brace." (Rec., 164.)

Expert witness L. W. Seely testified on the subject as follows:

"Mr. Cramer conceived the idea that, if he hung " his treadle in the brace, it would be totally discon- " nected both from the legs of the machine and from " the tie-rod, and all the objections which had been " insuperable from both of these forms of treadle " support, would be done away with; that is the con- " struction which he describes in his patent, the " hanging of the treadle on bearings which are in

"holes at the lower end of the vertical brace; and as "that brace is a solid, rigid piece, the bearings al- "ways remain where they are first put, that is, in "line; if the legs should spread, no effect is pro- "duced upon the bearings of the treadle, since it is "impossible for the fork of a double brace to move "or to spread, and the bearings will remain in line "and at a fixed distance apart." (Rec., 120.)

Herman Cramer describes in detail the defects of the prior art, and tells about the numerous and continuous experiments he made with a view to overcoming the same, and he did overcome them by the invention in question. He was asked what was the result of putting the treadle in the vertical double brace instead of in the legs or on the bar or tie-rod. His answer was, it gave it a stationary and more uniform motion, and no inexperienced person could get it out of line; it was always in line, as near frictionless and noiseless as it could possibly be. (Rec., 40.)

Herman Cramer, Jr. (Rec., 175 *et seq.*), and Mrs. E. S. Abbott (Rec., 155) gave valuable testimony on the same subject. The last-named witness was a professional seamstress, familiar with all the details of a sewing machine. She testified that she used one of the Cramer machines constantly for ten years, and that it never got out of alignment; that it always gave perfect satisfaction, and that she never heard

of any complaint from the other people who had used the Cramer machine. (Rec., 155.)

Many of the defendant's witnesses on cross-examination admitted the value of the Cramer invention.

But the strongest possible evidence of the advantage and utility of mounting the treadle in the vertical brace is the fact that the Singer Company originally mounted its treadle on the tie-rod and in the legs, when they knew of no better method, but as soon as the Cramer patent was issued and their attention was called to the advantage of mounting the treadle in the vertical brace, they abandoned the old method and adopted the new one. That was shortly after the Cramer patent was issued, and since then they have sold many millions of machines with the treadle mounted in the brace, and have never changed from that construction.

A catalogue of the Singer Company, of 1885, put in evidence as complainant's Exhibit L (Rec., 52), contains a cut of the infringing machine, with the treadle mounted in the brace, and the following description thereof:

"The balance-wheel and *treadle have their bear-*
" *ings entirely independent of the stand* (or legs),
" thereby assuring a correct adjustment and easy ac-
" tion. This device prevents the 'building' which

"so often follows a slight displacement of the sup-
"ports of the machine, *a difficulty rarely appreci-*
"ated, except by a skilled mechanic, which hitherto
"it has been impossible to remedy. This distinctive
"feature of the Singer machine is of great import-
"ance to the health and comfort of the operator.
"The balance-wheel and treadle also work upon ad-
"justable centers, by means of which the friction is
"reduced to a minimum, while lost motion can be
"readily taken up. These devices render the New
"Singer stand the lightest running of any sewing-
"machine motion ever constructed."

And in another catalogue of the same company, issued in 1889 (Rec., 50), we find a cut of the infringing machine and the following statement underneath:

"The above cut shows the I. F. Machine mounted
"on a simple and elegant form of cabinet work,
"which is very popular with those who require a
"machine for daily use. It also shows a new (pat-
"ented) and light running stand, upon which all
"our family machines are mounted, with band
"wheel and *treadle entirely supported within the*
"brace, insuring accurate adjustment and ease of
"operation."

And in another part of the same circular, where reference is made to the treadle bearings, it is said:

"These bearings *being entirely within the brace,*

" the adjustment is not affected by any strain which " may be put upon the same."

The witness Lawler, who was a former employee of the Singer Company, testified that in 1874 the Singer Company mounted the treadle on the tie-rod by means of cones and set-screws; that this mounting, being found objectionable, was discarded, and in place thereof the treadle was mounted in the legs; that this was also found objectionable, and in about 1885 that method also was discarded, and the treadle was mounted in the vertical brace, where it has ever since remained, and from which no change has been made by the Singer Company, the same giving perfect satisfaction, and many millions of machines of that style being sold.

In view of the foregoing facts, all shown by the record and taken as absolutely true on this hearing, we submit that the Cramer invention is fundamental in character, and that it introduced into the art an absolutely novel feature of great utility, to-wit: *the mounting of a treadle in the vertical double brace of a sewing machine stand.* It matters not what kind of bearings are used for so mounting the treadle. They may be common journal bearings, or point-center bearings, or knife-edge bearings, or any other

species of bearings. The fundamental idea was to mount the treadle in the brace, without regard to the character of the bearings. Beyond all peradventure of a doubt, such is the scope of *the actual invention* made by Mr. Cramer, and, consequently, the court will construe his claim to be commensurate with the scope of that invention, unless there is something apparent on the face of the patent itself to show that Cramer did not intend to make such broad claim, but deliberately and intentionally abandoned and dedicated to the public the broad feature of his invention. This brings us to a consideration of the second proposition, viz:

2. CONSTRUCTION OF THE CLAIM IN THE LIGHT OF THE STATUTE PRESCRIBING THE FORM OF PATENT CLAIMS.

We understand the contention of our adversaries to be that the language of the claim is such that it cannot receive a broad construction, but must be limited to the precise mechanism shown in the patent. In other words, while admitting the broad and pioneer character of the *invention actually made* by Cramer, it is insisted that he abandoned and dedicated to the public the broad feature thereof, because the language of the claim, as a mere matter of

language and grammar, is not sufficiently comprehensive to cover the broad invention actually made.

It is our contention, however, that this claim is drawn in strict compliance with the statute, and, being so drawn, *per force,* it covers the actual invention made, which we have already shown was broad and generic.

This claim, as a mere matter of language, appears to be drawn to the special device shown in the specification; but that fact does not prevent it from receiving a broad construction, in view of the pioneer character of the actual invention made. Claims for pioneer inventions, though couched in specific language, are entitled to a construction commensurate with the scope of the actual invention, unless there be a manifest intention, apparent on the face of the patent, to limit the claim to a specific form and to dedicate the broad feature to the public. Indeed, according to the letter of the statute, *all* claims, whether for broad or narrow inventions, should be couched in specific terms. We are aware that the modern tendency of patent solicitors is to draft claims in generic language, but this is not in accordance with the letter of the law. While we do not go so far as to contend that a claim for a generic invention, couched in generic language, is bad, we do as-

sert that a claim for a generic invention, couched in specific language, is good.

Prior to 1836, it was not necessary for a United States patent to contain any claim at all. The first patent act passed by Congress, that of 1790 (First Statutes at Large, 109), provided that a person who had made an invention and desired to secure a patent therefor, might file a petition with the Secretary of State, Secretary of War, and the Attorney-General, setting forth that he had made an invention and desired to secure a patent therefor; whereupon it became lawful for the said officials, or any two of them, if they deemed the invention sufficiently useful and important, to cause letters patent to be made out therefor, reciting the allegations and suggestions of the petition, "and describing said invention or "discovery clearly, truly, and fully, and thereupon "granting to such petitioner or petitioners, his, her, "or their heirs, administrators, or assigns, for any "term not exceeding fourteen years, the sole and ex- "clusive right and liberty of making, constructing, "using and vending to others to be used, the said in- "vention or discovery."

These letters patent were then delivered to the Attorney-General of the United States, whose duty it

was to examine the same and see if they were in conformity with the act, and they were then presented to the President, who caused the seal of the United States to be affixed thereto.

The act further provided that the patentee, at the time that the patent was granted to him, should deliver to the Secretary of State "a specification in "writing, containing a description, accompanied "with drafts or models and explanations of models "(if the nature of the invention or discovery will "admit of a model) of the thing or things by him "invented or discovered and described as aforesaid "in the said patent, which specification shall be so "particular, and said model so exact, as not only to "distinguish the invention or discovery from other "things before known and used, but also to enable a "workman or other person skilled in the art of manufacture whereof it is a branch, or wherewith it "may be nearest connected, to make, construct, or "use the same, to the end that the public may have "the full benefit thereof after the expiration of the "patent term."

No technical "claim" was required, but merely a definite description of the invention.

The foregoing act was repealed on February 21,

1793, and a new patent act, known as the patent act of 1793, enacted in its stead. (First Statutes at Large, 318). This second patent act provided that the petition should be presented by the inventor to the Secretary of State, praying that a patent be issued for the invention, and that the Secretary of State should thereupon cause letters patent to be made out, reciting the allegations and suggestions of the said petition, and "giving a short description "of the said invention or discovery." These letters patent were then delivered to the Attorney-General as before, and the letters patent were then sealed and delivered. The act further provided that before the inventor could receive his patent, he should make oath that he verily believed himself to be the true inventor, and "shall deliver a written description of "his invention and the manner of using or process "of compounding the same, in such full, clear, and "exact terms as to distinguish the same from all "other things before known, and to enable any per-"son skilled in the art or science of which it is a "branch or with which it is most nearly connected, "to make, compound, and use the same. And in "case of a machine, he shall fully explain the prin-"ciple and the several modes in which he has con-

" templated the application of the principle or char-
" acter by which it may be distinguished from other
" inventions; and he shall accompany the whole with
" drawings and written references, where the nature
" of the case admits of drawings, or with specimens
" of the ingredients and of the composition of matter
" sufficient in quantity for the purpose of experi-
" ment, where the invention is a composition matter,
" which description, signed by himself and attested
" by two witnesses, he shall file in the office of the
" Secretary of State."

Neither did this act make any provision for a technical "claim," but merely for a written description. Intermediately between this act and that of 1836, various and sundry amendments were enacted, but none of them referred to the subject matter under consideration, and therefore need not be considered.

In 1836 Congress passed the patent act which is the foundation of our present patent system and a radical departure from anything which had preceded it. By that act, the Patent Office was established, and the elaborate system of business, substantially as at present conducted by that office, was inaugurated. The manner of securing patents ordained by that act was by the filing of a petition and

specification with the commissioner of patents, and an examination and allowance by the Patent Office, and the issuance of a patent therefor. Among other things, it was provided that before an applicant could receive a patent "he shall deliver a written de- "scription of his invention or discovery, and of the "manner and process of making, constructing, using "and compounding the same, in such full, clear, and "exact terms, avoiding unnecessary prolixity, as to "enable any person skilled in the art or science to "which it pertains, or with which it is most nearly "connected, to make, construct, compound, and use "the same; and in case of a machine he shall fully "explain the principle and the several modes in "which he has contemplated the application of that "principle or character, by which it may be distin- "guished from other inventions; *and shall particu- "larly specify and point out the part, improvement, "or combinations which he claims as his own inven- "tion or discovery.*"

The last clause, put in italics by us, was a new feature, and is the provision requiring the applicant to make a technical "claim." Ever since then, all patents are required to have a claim.

The act of 1836, after being amended from time to

time, finally culminated in the consolidated patent act of 1870, and this was substantially embodied in the revised statutes, which constitute the present law of the land. By section 4888 of said revised statutes it is provided as follows:

"Before any inventor or discoverer shall receive a "patent for his invention or discovery, he shall make "application therefor in writing to the commis- "sioner of patents, and shall file in the Patent Office "a written description of the same and of the man- "ner and process of making, constructing, com- "pounding, and using it, in such full, clear, concise "and exact terms as to enable any person skilled in "the art or science to which it pertains, or with "which it is most nearly connected, to make, con- "struct, compound, and use the same; and in the "case of a machine he shall explain the principle "thereof and the best mode in which he has contem- "plated applying that principle, so as to distinguish "it from other inventions; *and he shall particularly "point out and distinctly claim the part, improve- "ment or combination which he claims as his inven- "tion or discovery.*"

The last clause, put in italics, is the same as the corresponding clause of the act of 1836, and is the one which provides for a "claim." Note carefully the language thereof—he shall *particularly point out and distinctly claim* the part, improvement or

combination which he claims as his invention or discovery. This language is not meaningless. It conveys a definite and exact thought. After the patentee has, in his specification, fully described his invention, he must then *particularly* and *distinctly* claim that part of it for which he desires protection. An invention (we are now referring to machines) must be embodied in concrete form. The drawings must show it in such form, and the specification must so describe it. It must likewise be shown and described only in one form, which, according to the act, must be "the best mode in which he has contemplated ap-" plying that principle." After this is done, the law requires nothing more than that the applicant shall *particularly* and *distinctly* point out the part or parts of that described machine which he claims as his invention. If it be a particular lever, cam, screw, or clutch, he must *particularly* and *distinctly* claim such lever, cam, screw, or clutch, and in so doing he must call it by its appropriate and specific name. When he does that, he has "claimed" his invention strictly according to the statute. The law does not assume that he is a rhetorician, or skilled in dialectics, nor require that he shall adopt broad and generic language in order to get full protection. It

merely requires that he shall claim the thing which he has invented, and in so claiming may call it and designate it by its own particular name. This is true, whether the invention be broad or narrow, pioneer or improvement, because the statute has made no distinction in claiming different kinds of invention. They must all be claimed in one and the same manner.

We are certain, therefore, that according to the statute it is sufficient for a patentee to claim his invention *in the specific forms shown by the drawings and specification,* whether that invention be a broad or narrow one, and that there is no provision of the law for framing the so-called "generic" claims of modern days.

When it comes to the matter of construing these claims, then a different proposition arises. The mere fact that the claim is drawn to the specific form shown does not necessitate a narrow construction, because that is the form of claim, and the only form, provided for by the statute, and whether or not the claim shall be limited to that specific form, or extended to cover other forms, depends solely and entirely upon the scope of the actual invention made. If the invention be a narrow one, then the claim will

be limited to the specific form shown and claimed; if it be a broad, pioneer invention, then the claim will not be so limited, although couched in specific language, but will be extended to other forms in which the invention may be embodied. In every case, therefore, we must go to the state of the art and ascertain what is the actual scope of the invention. That is the pivot on which every other question turns in a patent case. As stated above, we do not go so far as to contend that the modern generic claims are absolutely void, because that is not necessary to the argument, but what we do claim is that the statute authorizes—in fact, commands—that all claims must be drawn in specific terms, and, consequently, a claim for a pioneer invention, drawn in specific terms, will and must receive just as broad a construction as though framed in the broadest and most generic terms.

If the foregoing argument be sound, then there can be no possible criticism of Cramer's claim. He made a broad, generic invention, consisting in mounting the treadle of a sewing machine in the double vertical brace. In order to so mount the said treadle, it was necessary to use some form of bearing, and he was entitled to borrow from the then existing

art any known form of bearing, the only proviso being that he must show the one that he considered best. Under this provision of the law, he selected the knife-edge form, and in order to utilize that particular form, it was necessary to provide his treadle with trunnions. Consequently, he shows and describes, as the best form of his invention, a treadle provided with trunnions formed into knife-edge bearings. He then claimed the invention in that form, just as the statute required him to do, and we submit that this was not only sufficient in law, but strictly in accordance therewith.

While this particular question has never been raised in the manner in which it is now put, so far as we are aware, still there is abundant authority to be found in the books for our contention.

Winans vs. *Denmead*, 15 How., 330, is an apt illustration of the point under discussion. The case is so familiar to all that it would be a waste of time to refer to it in detail. The claim of the patent read as follows:

"Making the body of a car for the transportation "of coal, etc., *in the form of a frustum of a cone*, "substantially as herein described, whereby the "force exerted by the weight below presses equally "in all directions and does not tend to change the

"form thereof, so that every part resists its equal "proportions, and by which also the lower part is "so reduced as to pass down within the direct frame "and beneath the axle to lower the center of gravity "of the load without diminishing the capacity of the "car, as described."

Eliminating the descriptive part, it will be seen that the claim is, in substance, for a coal-car made *in the form of a frustum of a cone.* The language is severely specific, and was drawn to the exact form shown in the specification and drawings. The illustration was a coal-car made in the form of a frustum of a cone. The description of the invention was the same. The claim was likewise the same, thus placing the patentee directly within the statute, which orders him to *particularly* and *distinctly* point out the part of the device which he claims as his invention. There could not be conceived a clearer case for the illustration of our position.

The question for the court to determine was the proper construction of this claim. Should it be limited to the form of a frustum of a cone, or could it lawfully be extended to cover other forms, for instance, the frustum of a pyramid? This court held that the solution of the question depended upon the scope of the actual invention. If the invention was

generic, the claim would receive a generic construction. If specific, then it would receive a specific construction and be limited to the conical form. The court held that the invention was generic, gave it a broad construction, and adjudged that the defendant's car, which was made in the form of the frustum of a pyramid, was an infringement. In delivering the decision of the court, Mr. Justice Curtis used the following language, which has become classic in the history of patent cases:

"It is generally true, when a patentee describes a "machine and then claims it *as described,* that he is "understood to intend to claim, and does by law ac- "tually cover, not only the precise form he has de- "scribed, but all other forms which embody his in- "vention, it being a familiar rule that to copy the "principle or mode of operation described is an in- "fringement, although such copy should be totally "unlike the original in form or proportion * * * "Patentees sometimes add to their claims an express "declaration to the effect that the claim extends to "the thing patented however its form or proportions "may be varied. But this is unnecessary. The law "so interprets the claim without the addition of "these words. The exclusive right to the thing pat- "ented is not secured if the public are at liberty to "make substantial copies of it, varying its form or "proportions. And, therefore, the patentee, having "described his invention, and shown its principles,

"and claimed it *in that form which most perfectly* "*embodies it,* is, in contemplation of law, deemed to "claim every form in which his invention may be "copied, unless he manifests an intention to disclaim "some of those forms."

In other words, this court construed the claim as if it had read: "Making the body of a car for the "transportation of coal, etc., *in a. downwardly* "*tapering form," etc., etc.*

This case was afterwards followed and approved by this court in:

Western Elec. Co. vs. *La Rue,* 139 U. S., 606.
Hoyt vs. *Horne,* 145 U. S., 309.
Eddy vs. *Dennis,* 95 Id., 569.

And also by the lower courts in:

Frost vs. *Silverman,* 62 Fed. R., 465.
Hoe vs. *Scott,* 65 Id., 609.
McCormick vs. *Altman,* 69 Id., 394.
Heap vs. *Greene,* 91 Id., 794.
Norton vs. *Jensen,* 49 Id., 866.
Long vs. *Pape,* 75 Id., 838.
Independent E. L. Co. vs. *Jeffrey,* 76 Id., 991.
Metallic Ex. Co. vs. *Brown,* 104 Id., 353.
Reece vs. *Globe Mch. Co.,* 61 Id., 958.
Devlin vs. *Paynter,* 64 Id., 398.

and many others.

It will thus be seen that the case of *Winans* vs. *Denmead* has, for the last half century, been consistently followed by the federal courts, both appellate and *nisi prius,* and never once doubted. It is to-day the law of the land, and under its authority Cramer was fully justified in framing his claim in the form in which it appears in his patent.

One of the most eminent judges who ever decided patent cases was the late Mr. Justice Bradley. He is often referred to as a "strict constructionist" in the interpretation of patent claims; yet no one could be more liberal than he, where he was satisfied that the patentee had made a meritorious invention but had been unfortunate in the choice of terms in his claims, and that the defendant was relying upon a mere verbal distinction to save himself from the penalty of infringement. A notable instance of this is seen in the case of *Ives* vs. *Hamilton,* 92 U. S., 426. The invention related to a method for hanging a saw in a saw-mill, and was one of great value. The claim was couched in the following awkward phraseology:

"Giving to the saw in its downward movement a "rocking or rolling motion by means of the com- "bination of the cross-head working in *curved* "guides at the *upper* end of the saw, the lower end "of which is attached to a cross-head working in

"*straight* guides and pivoted to the pitman *below* "the saw, with the crank-pin substantially as de- "scribed."

This claim described the cross-head as working in *curved* guides, at the *upper* end of the saw, and the *lower* end of the saw attached to a cross-head working in *straight* guides and pivoted to the pitman *below* the saw. The defendant was able to evade the letter of the claim by discarding the *curved* guides for the upper cross-head and using instead thereof *angular* guides, and by pivoting the lower end of the saw to the pitman *below*, instead of *above*, the cross-head. In the court below the case was tried by a jury, resulting in a verdict for the plaintiff, and on motion for new trial (6 Fish., 244) Judge Longyear sustained the verdict and rendered a most able opinion in support of the patent. These views were concurred in by Mr. Justice Bradley, who affirmed the judgment and gave a sufficiently broad construction to the patent to include the defendant's machine. The claim had been drawn to the precise mechanism shown in the patent. The patentee had *particularly* pointed out and *distinctly* claimed the part of the machine which was his invention as required by law, and it being a broad invention, the claim was held broad enough to cover the variations from that form

which accomplished the same result. Had the claim been worded in generic terms, the defendant doubtless would not have contested the point; but, as it was worded in specific terms, he urged that it must be limited to the specific form. But the court held otherwise. This case is a direct authority for our proposition, that, where the invention is a broad one, it is sufficient to claim it in the form shown in the patent, and the claim will be construed to cover and include all other forms which accomplish the same result in substantially the same manner.

The case of *Clough* vs. *Barker,* 106 U. S., 166, is another instance in point. The invention was an improvement in gas-burners, and the second claim of the patent read thus:

"In combination with the bat-wing burner, perforated at the base and surrounding tube, the tubular valve for regulating the supply of external gas to the burner, substantially as described."

This claim was drawn to the precise structure shown, *particularly* and *distinctly,* as the statute requires. It appeared that in no prior structure had a valve arrangement been applied to regulate the flow of gas in such a combination, and, consequently, the claim was entitled to a broad and liberal interpreta-

tion. The defendant had varied the form of construction, but this court held that the claim must be given a sufficiently broad construction to include the defendant's burner. The decision, rendered by Mr. Justice Blatchford, used the following language:

"Although in the Clough structure the burner and "surrounding tube revolve together in adjusting "their position in reference to that of the tubular "valve, so as to let in or turn off the supply of gas "through the perforations, and although in the "Clough structure the flame revolves by the revolu- "tion of the burner, and although in the defendant's "burners the revolution of the surrounding tube "regulated the supply of gas through such perfora- "tions, and neither the burner nor the flame re- "volved, the defendant's valve arrangement must be "held to have been an equivalent for that of Clough "to the full extent to which that of Clough goes, in- "volving, perhaps, improvements, but still tribu- "tary or subject to the patent of Clough. It is true "that that patent describes the tubular valve as be- "ing inside of the burner tube. But Clough was the "first person who applied a valve regulation of any "kind to the combination to which he applied it, "and the first person who made such combination, "and he is entitled, under decisions heretofore made "by this court, to hold as infringements all valve "regulations, applied to such a combination, which "perform the same office in substantially the same "way as, and were known equivalents for, his form "of valve regulation."

Another apt case is that of *Western Electric Co.* vs. *La Rue,* 139 U. S., 601, where the opinion was rendered by Mr. Justice Brown. The invention was stated in the specification to relate to "telegraph keys," and the claim involved read as follows:

"The combination in a *telegraph key* of a lever, "fulcrumed upon the torsional spring, with the ad- "justing screws 'HH' for regulating the amplitude "of the lever movement and the retractile resistance "of the torsional spring, substantially as described."

It will be observed that the claim distinctly refers to a "telegraph key," which is an instrument used for sending messages, not for receiving them. The defendant had used the same combination in a "telegraph sounder," which is an instrument used for receiving the message at the opposite end of the line. The question was whether this claim should be limited by the exact language used, or whether it should be given a construction broad enough to include other instruments than a telegraph key. This court held that, inasmuch as the patentee was the first in the art to apply the principle of a torsional spring to telegraph instruments of any kind, his claim should be given such construction as would include the use of the spring in all such instruments, whether they be keys for the transmission of messages or sounders

for the receipt of messages. The patentee had *particularly* and *distinctly* claimed his invention in the form shown in his patent, but as it was of a pioneer character, the claim in that form was held to be sufficient to cover other forms. In deciding the case, Mr. Justice Brown used the following pertinent language, at page 606:

"Against this analogous use of his combination, "the patentee is as much entitled to protection as if "the word 'sounder' had been expressly inserted in "his claim. Since the case of *Winans* vs. *Denmead,* "15 How., 330, it has been the settled doctrine of "this court, as expressed in the opinion of Mr. Jus- "tice Curtis, p. 343, that the patentee, having de- "scribed his invention and shown its principle and "claimed it in that form which most perfectly em- "bodies it, is in contemplation of law, deemed to "claim every form in which his invention may be "copied, unless he manifests an intention to disclaim "some of these forms."

The next case in point, also decided by Mr. Justice Brown, is *Hoyt* vs. *Horne,* 145 U. S., 302. The invention related to a rag-engine for making paper, and the claim read as follows:

"The improvement in beating rags to pulp in a "rag-engine, having a beater-roll and bed-plate "knives, consisting in circulating the fibrous ma- "terial and liquids in vertical planes, drawing the

"same between the knives at the bottom of the vat, "carrying it around and over the roll, and deliver- "ing it into the upper section of the vat, substan- "tially as described."

The circulation of fibrous material and liquid in vertical planes resulted from passing that material alternately under and over a horizontal partition; whereas in the prior art that material had been circulated horizontally around a vertical partition. The defendant's apparatus was provided with a horizontal partition at one end and a vertical partition at the other, and therefore, the pulp in it did not circulate in vertical planes, as called for by the plaintiff's patent. In rendering the decision, Mr. Justice Brown said (p. 308):

"It is insisted by the defendant, in this connection, "that there is no infringement of the first claim of "the Hoyt patent, since the pulp is not circulated in "vertical planes, nor is it delivered by the beater roll "into the upper section of the vat as specified in that "claim. Literally, it is not. A technical reading of "the specification undoubtedly requires that the "mid-feather should run horizontally instead of "vertically; but the object of this was that the pulp "should be received and delivered by the beater- "roll along its entire length, viz: across the entire "width of the tub, and this is accomplished in the "same way in both devices. * * * The substi-

" tution of a vertical for a horizontal mid-feather at " the inoperative end of the tub is merely the use of " an old and well known mechanical equivalent, and " obviously intended to evade the wording of the " claim of the Hoyt patent. (*Winans* vs. *Denmead,* " 15 How., 330.) Indeed, the ingenuity displayed " in this evasion is only equalled by the ingenuity " with which it is concealed in the specification of " the defendant's patent."

In the case of *Sessions* vs. *Romadka,* 145 U. S., 29, where the opinion was rendered by Mr. Justice Brown, the invention related to a trunk-fastener, and the claim was couched in the following narrow specific terms:

"The spring catches I, constructed and applied to " the front of the body, as described, in combination " with the tongues or hasps J on the top, when ar- " ranged to operate as set forth."

It would scarcely be possible to conceive of language more narrow in description than that of this claim. It even goes to the extent of designating the elements by specific letters. It also does another, and a most unusual thing, that is, in the body of the claim, after specifying one of the elements by letter, it adds the words "as described"; and at the end of the claim it adds the following unusual form of lim-

itation, viz: "When arranged to operate as set "forth."

If there ever was a case on record where the language of the claim was specific, this is the case. The patentee had, with the most servile fidelity, adhered to section 4888 of the revised statute in *particularly* and *distinctly* pointing out the part of the machine which he claimed. The defendant, of course, had used a different form of construction, and thereby had avoided the language of the claim. But it appeared from the evidence that the invention was pioneer in character, and this court, without any hesitation whatever, held that it was entitled to a broad construction, and was not limited to the specific devices called for by the language of the claim. Said Mr. Justice Brown, in rendering the decision of the court:

"In view of the fact that Taylor was a pioneer in "the art of making a metallic trunk fastener, and in- "vented a principle which has gone into almost uni- "versal use in this country, we think he is entitled to "a liberal construction of his claim, and that the "Romadka device, containing as it does all the "elements of the combination, should be held to be "an infringement, though there are superficial dis- "similarities in their construction."

Compare this case with *Sutter* vs. *Robinson,* 119 U. S., 531, *Keystone Bridge Co.* vs. *Phoenix Iron Co.,* 95 U. S., 274, and *Hendy* vs. *Iron Works,* 127 U. S., 370, where the elements of the claims were referred to by reference letters and the claims construed narrowly and limited to the specific form shown, not because the language was narrow, but because the invention was narrow.

It is shown by the evidence that the principle embodied in the machine of each of said cases was old and that the invention was a narrow one. Consequently, this court limited the claim in each case to the precise construction shown, and held that an apparatus of a different construction, though embodying the same principle, was no infringement.

The point we are discussing is very clearly illustrated by the decision of this court in the case of *Deering* vs. *Winona Harvester Works,* 155 U. S., 286, involving the patent of one Olin relating to a harvester.

The claim was drawn to the specific construction shown, as the statute requires, and the question at issue was what construction should be placed upon the claim. It appearing that the invention itself was a narrow one and not of a pioneer character, a narrow construction was placed on the same, which

was limited to the specific mechanism shown. In rendering the decision of the court Mr. Justice Brown said:

"If Olin had been the first to devise the contriv-
"ance of this description for adjusting the flow of
"grain upon the main elevator, it is possible that un-
'der the cases of *Ives* vs. *Hamilton,* 92 U. S., 426,
"and *Hoyt* vs. *Horne,* 144 U. S., 302, a construction
"broad enough to include defendant's device might
"have been sustained. But in view not only of the
"prior devices, but of the fact that his invention was
"of doubtful utility and never went into practical
"use, the construction claimed would operate rather
"to the discouragement than the promotion of in-
"ventive talent."

In other words, the mere wording of a claim is not of any great moment in determining its construction; but the scope of the invention itself is the important feature. If the invention is a broad one, the court will give the claim a broad construction, notwithstanding the fact that the claim is framed in specific language; but if the invention is a narrow one, then the court will place upon the claim a narrow construction and limit it to its exact language.

As bearing on the point we may refer also to the case of *Westinghouse* vs. *Boyden Power Brake Co.,* 170 U. S., 568, where it is said:

"We have repeatedly held that a charge of in-
"fringement is sometimes made out though the let-
"ter of the claim be avoided. *Machine Co.* vs. *Mur-*
"*phy,* 97 U. S., 120; *Ives* vs. *Hamilton,* 92 U. S.,
"426; *Morey* vs. *Lockwood,* 8 Wall., 230; *Eliza-*
"*beth* vs. *Pavement Co.,* 97 U. S., 126; *Sessions* vs.
"*Romadka,* 145 U. S., 29; *Hoyt* vs. *Horne,* 145 U.
"S., 302."

A most instructive case, from a *nisi prius* court, however, is that of *Murphy* vs. *Eastman,* 5 Fish., 306, decided by Judge Shepley a great many years ago. The invention related to a brush-head, and was described in a specific geometric form and claimed in that form. The defendant had used a different geometric form and thereby evaded the strict wording of the claim; but the invention being one of a pioneer character, infringement was found. In deciding the case Judge Shepley used the following language:

"The patentee does not, as is sometimes done,
"claim in terms the thing patented, however its
"form and proportions may be varied; but the law
"so interprets the claim without the addition of
"these words. In contemplation of law after he
"has fully described and claimed it in a form which
"perfectly embodies it, unless he disclaims other
"forms, he is deemed to claim every form in which
"his invention may be covered."

Another case of like import is that of *Metallic Extraction Co.* vs. *Brown,* 104 Fed. Rep., 346, which was decided by the circuit court of appeals for the eighth circuit. The invention related to an ore-roasting furnace, and the claim read as follows:

"In an ore-roasting furnace having means for "stirring and advancing the ore, a supplemental "chamber *at the side of the* main roasting chamber "and cut off from said main chamber by a wall or "petition, and carriers in said supplemental cham-"bers connected with the stirrers, but removed from "the direct action of the heat, fumes and dust, sub-"stantially as herein described."

It will be observed that the language of this claim required that the supplemental chamber should be located *at the side* of the main roasting chamber. It was so shown in the drawings and described in the specification without any statement or intimation that it could be located at any other place. The defendant had located his supplemental chamber *under* the main chamber instead of *at the side,* and the question was whether the claim must be limited by the language used to a supplemental chamber, placed at the side of the main chamber, or whether it could be construed to cover a chamber placed underneath, instead of at the side of the main chamber.

The court found that the invention was of a pioneer character, and, consequently, held that the claim was not limited to a supplemental chamber placed at the side of the main chamber, but was sufficient to cover one placed underneath. The judgment went for the patentee. If the court had found that the invention was not of a pioneer character, then the claim would have been limited to the language used and no infringement would have been adjudged.

Another instructive case is that of *McCormick Harvesting Machine Co.* vs. *Aultman,* 69 Fed. Rep., 371, decided by the circuit court of appeals for the sixth circuit, wherein the opinion was rendered by Judge Taft. The invention was for a grain binder, and the claims were most narrow and specific in terms, reading as follows:

"3. The reciprocating segments C_4, having the "feed teeth C6, in combination with the guides D, as "and for the purpose specified.

"10. The flexible strap g, arranged in receptacles G, to operate the trip lever H, in the manner "substantially as and for the purposes described.

"11. The combination of the binding strap and "cord g, with the bundle receptacle G, and tooth-"feeding segments C_4, substantially as and for the "purpose described."

It was found by the court that these claims covered inventions of a pioneer character, and, consequently, they were given a broad construction, notwithstanding their specific language.

In deciding the case Judge Taft used the following language:

"It is further pressed upon the court that the mere "fact that the claims of the Gorham patent are ex- "pressed by reference to the lettered parts of the ma- "chine, as shown in the drawings, must lead to a lit- "eral and formal construction of the claims, and "limit their scope exactly to the form of the device "used and suggested by Gorham. * * * Wheth- "er he specifically claims in his patent the benefit of "equivalents or not, the law allows them to him "according to the nature of his patent. If it is a "mere improvement on a successful machine, a mere "tributary invention, or a device the novelty of "which is confined by the past art to the particular "form shown, the range of equivalents is narrowly "restricted. If it is a pioneer patent with a new re- "sult, the range is very wide, and is not restricted "by the failure of the patentee to describe and claim "combinations of equivalents. Nothing will restrict "a pioneer patentee's rights in this regard save the "use of language in his specifications and claims "which permit no other reasonable construction "than one attributing to the patentee *a positive in-* "*tention* to limit the scope of his invention in some "particular to the exact form of the device he

"showed, and a consequent willingness to abandon "to the public any other form, should it be adopted "and prove useful."

Hundreds of other cases of similar import might be cited; but we trust that our contention is made sufficiently clear, and therefore we shall not weary the court with further citations.

But irrespective of the above considerations, does the language of the Cramer claim, as a mere matter of language, compel a narrow construction? This brings us to the third step in our argument, viz:

3. CONSIDERATION OF THE CRAMER CLAIM IN THE LIGHT OF ITS TECHNICAL LANGUAGE AND AS A MERE MATTER OF LANGUAGE.

It is insisted by our learned adversaries that the specific language of Cramer's claim is such as to compel a narrow construction; but a careful analysis of the matter will demonstrate the fallacy of this contention. The argument advanced is that one of the elements of the combination is the term "trunnions," and that the defendant's machine has no trunnions.

Be it remarked *in limine* that this term is a technical term, and the aid of experts was required to explain it. Much evidence *pro* and *con* was offered at

the trial. Experts were produced on both sides, and their testimony was conflicting. Those for the plaintiff advanced one theory, while those for the defendant advanced a different one. This conflicting evidence was very properly submitted to the jury, who decided in favor of the plaintiff's theory. Consequently, that decision cannot be reviewed here, because it was the finding of a jury on a contested issue of fact. This, in our opinion, ought to end the matter; but for fear that our adversaries may accuse us of endeavoring to shirk an issue by invoking a technical rule of appellate practice, we proceed to show the ground on which the jury decided this point.

The definition of the term "trunnion" given in Knight's mechanical dictionary, a standard authority, is as follows:

"Trunnion. 1. (Steam engine.) One of the hol-
"low axes on which the cylinder of an oscillating en-
"gine reciprocates and through which steam is re-
"ceived and exhausted.

"2. (Ordnance). One of the cylindrical projec-
"tions from the sides of a cannon or mortar, which
"rests in the cheeks of the carriage, forming sup-
"ports for the piece and an axis on which it turns
"during elevation and depression. The trunnion is
"usually one calibre in diameter and length.

"3. A general term for an axis of similar char-
"acter to the above."

Test. of L. W. Seely (Rec., 126).

The first of these definitions may be disregarded, as it is technical and special. The second one, while relating specifically to a cannon, or mortar, points out two essential attributes which characterize the term, viz: Acting as supports for the gun and an axis of elevation and depression. The third definition is the broadest in that it applies the term to an axis of similar character when used in any kind of machine. Now as the trunnions of a cannon are used, according to the definition, only for the two purposes of supporting the gun and serving as an axis on which it oscillates during elevation and depression, this third definition includes a device in any and all kinds of machines, which operates as such *support* and as such *axis*. Those are the two essential attributes of a trunnion, the characteristics which determine whether a given device is a trunnion. In this sense the term trunnion is used in Cramer's claim. The things or devices in his sewing machine which he designates as trunnions act as supports for the treadle and as an axis on which the treadle turns during elevation and depression. This

'brings them within the purview of Knight's third definition. It is immaterial by what name those things or devices be called. The material point of inquiry is as to their characteristics and functions. If, instead of using the term trunnions, the claim had said "devices forming supports for the treadle "and an axis on which it turns during elevation and "depression," no different meaning would have been conveyed. That expression is equivalent to the word trunnions as used in the claim.

So much for the term "trunnions." But the claim says further that the treadle is "fitted to oscillate in "said bearings." The word "fitted" means simply "adapted," and is free from ambiguity.

The expression "to oscillate in said bearings" requires a word of explanation. In mechanics the word "bearings" *ex vi termini* includes the idea of oscillation or movement of some kind. Consequently, when a device is "adapted to oscillate in bearings," it is merely "mounted in bearings," because when mounted in bearings it necessarily is "adapt-"ed to oscillate in said bearings." It cannot be so mounted without having such adaptability.

Now as the bearings in the Cramer machine are located in the lower ends of the vertical brace, and

as the specific character of those bearings is unimportant, so far as the actual invention is concerned, the expression "fitted to oscillate in said bearings" is the equivalent of the expression "mounted in the "lower ends of the vertical brace by some kind of "bearings." If our reasoning be sound, then the expression "a treadle provided with trunnions fitted "to oscillate in said bearings," found in Cramer's claim and constituting the bone of contention in this case, must be construed as the equivalent of the expression *a treadle provided with devices forming supports for it and an axis on which it turns during elevation and depression, and mounted in the lower ends of the vertical brace by some kind of bearings.*

This language, while somewhat wordy, shows clearly the meaning of the claim. Later on we shall show that it fits the Singer machine as accurately as it fits the Cramer.

In view of the foregoing, we submit that in framing his claim in the specific form shown in his patent Cramer is strictly within the letter of the law, and cannot be deprived of the fruits of his valuable invention by the over-nice distinctions and technical refinements of language which our adversaries put forth.

These facts, we submit, are undeniable, viz:

1. That the invention made by Cramer is broad and pioneer in character.

2. That it is of exceeding great value and a substantial contribution to the art.

3. That it is claimed in the manner directed by the statute.

4. That in order to secure to the patentee the full fruits of his valuable invention it must be construed broadly in the way we have suggested.

5. That, if construed narrowly in the way suggested by our adversaries, the patentee will lose the full benefits of the invention.

6. That there is no manifest intention on the face of the patent to abandon and dedicate to the public the broad feature thereof.

In conclusion we beg leave to advert to that cardinal rule of patent construction announced by this court through Mr. Justice Clifford many years ago in the case of *Turrill* vs. *Railroad Co.* (1 Wall., 510):

"Patents for inventions are not to be treated as "mere monopolies, and, therefore, odious in the eyes "of the law; but are to receive a liberal construc-

"tion, and under the fair application of the rule "*ut res magis valeat quam pereat,* are if practicable, "to be so interpreted as not to destroy the right of "the inventor."

And we also refer to the equally felicitous language of Mr. Justice Swayne, in *Rubber Co.* vs. *Goodyear* (9 Wall., 988):

"A patent should be construed in a liberal spirit "to sustain the just claims of the inventor. This "principle is not to be carried so far as to exclude "what it is, or to interpolate anything which it does "not contain. But liberality, rather than strictness, "should prevail where the fate of a patent is in-"volved, and the question to be decided is whether "the inventor shall hold or lose the fruits of his "genius and labors."

4. CONSTRUCTION OF THE PATENT IN THE LIGHT OF THE FILE-WRAPPER CONTENTS.

It is urged by our learned opponents that Cramer's claim must receive a limited construction because of the Patent Office proceedings, and they have put in evidence Cramer's file-wrapper contents (Rec., 194-202) in support of that contention. But so far from supporting that theory the document tends to prove just the opposite.

In this regard the precise contention is that the file-wrapper contents show that the invention is a

narrow one, limited to knife-edge bearings and loop holes in the lower ends of the vertical brace to act as seats for the knife-edge bearings.

We are aware of the rule of law which prohibits a patentee from insisting upon a broad construction of his claim in court, which he admitted in the Patent Office to be a narrow one and which was allowed by the Patent Office by virtue of such limitation. In other words, if an applicant asks for a broad claim in the Patent Office and is rejected upon references, and therefore amends his claim for the purposes of avoiding the references, making it a narrow one, and thereby acquiescing in the correctness of the Patent Office ruling, he cannot afterwards, when he gets into court, insist on the broad construction of his claim which he disavowed in the Patent Office. Under such circumstances he must abide by the limitations placed on the claim by the Patent Office and acquiesced in by him.

The converse of this ruling is equally true, viz: Where an applicant first asks in the Patent Office for a narrow claim and afterwards amends it by making it broader, and the broad claim is finally allowed, then the Patent Office proceedings furnish the strongest evidence of the correctness of the broad

construction. And this process of changing and amending and broadening his claim may be practiced by the applicant until the final allowance, so long as he does not make the claim broader than his actual invention. He may strike out the whole or any part of his specification. He may change his claim by either substraction or addition. He may add entirely new claims from time to time, and in fact may do anything which tends to the securing of a claim commensurate with his actual invention. It is not necessary to cite authorities to sustain these elementary principles; it is only necessary to apply them to the facts in hand.

Turning now to Cramer's file-wrapper contents, we find that not only did he not narrow or limit his claim, as originally presented, in order to secure its issuance, but, on the contrary, he broadened it from time to time until he procured the one appearing in his patent.

Cramer's original application was drawn by a firm of country lawyers, Street & Street, who lived at Sonora, a small town of Tuolumne county, in the backwoods of California. This firm of country lawyers had probably never seen a patent in their lives; certainly they had never drafted an application for

one. The application which they drafted for Cramer's patent, as was to be expected under the circumstances, was of the most informal character. It read as follows:

CRAMER'S FIRST SPECIFICATION.

"I, Herman Cramer, of the city of Sonora, in Tu-"olumne county, in the State of California, have "invented certain improvements in a treadle to be "used in sewing machines, or other machinery "where a noiseless treadle may be required, of "which the following is a specification:

"My invention consists of the usual platform "marked 'A' in Fig. 1 of diagram on treadle bar. "The ends of said treadle bar, marked 'B,' are "shaped like the letter V and rest in socket in lower "end of a brace 'C,' the socket being ♡ shaped, "the brace 'C' cast in one piece, and the treadle bar "and platform on the bar is also cast in one piece.

"The treadle bar rests in socket in brace 'C,' "which is immediately above a cross-brace usually "in machines to keep them from spreading apart, "the nut on end of cross-brace is marked 'D.' Let-"ter 'M' immediately beneath cross-brace and "treadle bar is an oil-receiver to retain any drip-"pings of oil from the bearings of treadle bar.

"My invention consists in having the ends of the "treadle bar V-shaped to fit in hole in brace 'C,' also "♡ shaped to receive the ends of the treadle "bar.

"This V-shaped treadle bar in brace 'C,' entirely

" prevents noise from the treadle, is self-adjusting, " and does away with the necessity of cones and set- " screws now in use. This I claim as my invention. " Fig. 1 represents platform 'A' and treadle bar, the " ends of which are V-shaped and marked 'B.'

" Fig. 2 represents the lower end of brace 'C' with " hole ♡ shaped to receive the ends of the treadle " bar 'B.' 'D' represents nut on end of cross-brace " immediately below treadle bar.

" HERMAN CRAMER.

Witnesses:

FRANK W. STREET.
CHARLES L. STREET."

" State of California,

" County of Tuolumne.

" Herman Cramer, the above-named petitioner, " being duly sworn, deposes and says that he verily " believes himself to be the original and first in- " ventor of the improvement in a noiseless self-ad- " justing treadle described in the foregoing specifi- " cations, that he does not know and does not believe " that the same was ever before known or used and " that he is a citzen of the United States.

" HERMAN CRAMER.

" Subscribed and sworn to before me this 15th day " of May, A. D. 1882.

" C. L. STREET,
" Notary Public."

This specification was not in conformity with the rules of the Patent Office: it contained no claim whatever, and the oath was incomplete. The answer

which the examiner made to the application was as follows:

"United States Patent Office,
"Washington, D. C., May 29, 1882.

"Treadle for sewing machine, etc. Filed May 25, 1882. No. 62,397.

"Herman Cramer, care Street & Street, Sonora, "Cal.:

"The application is not prepared in conformity "with the rules of the office. The specification is "written on both sides of the pages, while the rules "direct that it should be written on one side of each "page only.

"No claim is appended to the specification The "oath is incomplete, as Section 39 of the rules re- "quire—applicants to state under oath if the inven- "tion has been patented to them, or with their "knowledge and consent to others in any foreign "country, and if so, the number, date and place of "such patent or patents. Reference is made to the "patent to G. W. Gregory, No. 256,563, April 18, "1882, which exhibits the alleged invention.

"A. SCHOEPF, Examiner."

Permit us to pause a moment at this point to see what we can gather from Cramer's first specification. Informal and insufficient as it was, drawn by unskilled attorneys unfamiliar with patent law or the rules of the patent office, we nevertheless can find therein the fundamental idea and gist of the invention. In that specification it is said:

"The ends of the treadle-bar marked 'B' are "shaped like the letter V, and rest in sockets *in lower "end of a brace 'C.'*

Again, it is there said:

"The treadle-bar rests in sockets *in brace 'C'* "which is immediately above a cross-brace usually "in machines to keep them from spreading apart."

Again, it is there said:

"This V-shaped treadle-bar *in brace 'C'* entirely "prevents noise from the treadle, is self-adjusting, "and *does away with the necessity of cones and set-"screws now used. This I claim as my invention."* The italics used are ours.

Mr. Robinson in his work on patents says that the fundamental idea of an invention is an "idea of means." The quotations made above show that Cramer's "idea of means" was that of a treadle mounted in the vertical brace in contradistinction to those which had theretofore been mounted upon the tie-rod (referred to as a cross-bar), using cones and set-screws. His idea was not to mount the treadle in the legs, because he does not mention the legs, nor to mount it on the tie-rod (cross-bar) as had been formerly done, because he says that his construction "does away with the necessity of cones and "set-screws now in use," and cones and set-screws at

that time were not in use except on the tie-rod. The law does not presume that either Cramer or his country attorneys were rhetoricians, nor does it cast any reflection on them, because they were not versed in patent practice. It merely presumes that they were acquainted with the prior art, and the prior art used cones and set-screws on the tie-rod. Hence, if the idea of cones and set-screws is repudiated, the tie-rod is repudiated with them. There are but three parts of a sewing machine upon which a treadle can be mounted, viz: the tie-rod, the legs, and the vertical brace. In Cramer's first specification, crudely drawn as it is, he shows that neither the tie-rod, nor the legs formed part of his idea of means. We assert, therefore, that the fundamental idea of means shown in this first specification was that of a treadle mounted in the vertical brace, and from that idea the patentee has never departed.

We go back now to the patent office proceedings. In answer to the examiner's letter hereinabove quoted, Messrs. Street & Street prepared an amended specification. The office letter had given them their first lesson in patent office practice. The examiner pointed out that there must be a claim. Evidently they considered that this claim was nothing more

than an expression in language of the entire mechanical device. Consequently, they wrote the following as the claim for the new specification, viz:

"What I claim is the combination of brace 'C' "with sockets or bearings in it or on it to receive the "treadle-bar with the mufflers at the ends of treadle-"bar or in or on brace 'C' and the treadle-bar in "connection with brace 'C' and mufflers to work in "or on brace 'C' substantially as set forth."

This confused jumble of words, loosely and awkwardly thrown together to constitute a claim, was as bad as the absence of any claim at all. It is in effect an attempt at two claims in one, the first for the treadle and brace, the second for the mufflers inserted in it. Of course this was bad practice; but with all its crudity the salient features are clear. He had invented two things. The first was the mounting of the treadle in the brace; the second was the use of mufflers. These two together constituted his entire machine, and apparently the country attorneys thought that the whole machine must be put into one claim. They do not seem to have known that they were entitled to two claims, one for each of the features above named. The entire amended specification is as follows:

CRAMER'S AMENDED SPECIFICATION.

"I, Herman Cramer, of the city of Sonora, in "Tuolumne County, in the State of California, have "invented certain improvements in a treadle and "brace to be used in sewing machines or other ma- "chinery where a noiseless treadle may be required, "of which the following is a specification.

"My invention consists in a combination of the "usual platform marked 'A' in Figure 1 of diagram "on treadle-bar. The ends of said treadle-bar "marked 'B' are to bear against mufflers.

"The treadle-bar bearings are in and on brace 'C.' "The treadle-bar rests in socket in brace 'C' which "is immediately above a cross-bar usually in ma- "chines to keep them from spreading apart.

"The nut on end of cross-bar is marked 'D.' Let- "ter 'M' immediately beneath cross-bar and treadle- "bar is an oil-receiver to retain any drippings of oil "from the bearings of treadle-bar.

"The treadle-bar, mufflers and brace 'C' are held "between the right and left legs of the machine by "means of a brace bar underneath the treadle-bar.

"This brace and socket or bearing in or on brace "is in one piece.

"The treadle-bar with mufflers on the ends work- "ing or bearing in or on brace entirely prevents noise "from the treadle- is self-adjusting and does away "with the necessity for cones and set-screws now in "use.

"Figure 1 represents platform 'A' and treadle- "bar, the end of which may be V-shaped or any "shape to suit, marked 'B.'

" Figure 2 represents the lower end of brace 'C.'
" 'D' represents nut on end of cross-bar immedi-
" ately below the treadle-bar.

"What I claim is a combination of brace 'C' with
" sockets or bearings in it or on it, to receive the trea-
" dle-bar with the mufflers at the ends of treadle-bar
" or in or on brace 'C' and the treadle bar in connec-
" tion with brace 'C,' and mufflers to work in or on
" brace 'C' substantially as set forth.

" HERMAN CRAMER."

"Witnesses:

"CHARLES L. STREET.
" FRANK W. STREET."

That the original idea of means, viz, a treadle mounted in the brace, was not changed by this amended specification is apparent. In said specification he said:

"I, Herman Cramer, * * * have invented
" certain improvements in a *treadle and brace* to be
" used in sewing machines or other machinery where
" a noiseless treadle may be required."

Here we have the combination of the treadle and brace, no mention being made of the mufflers which are described later on.

Again, the amended specification says:

" The treadle-bar bearings are *in and on brace*
" *'C.'* The treadle-bar rests in socket *in brace 'C,'*
" which is immediately above a cross-bar usually in

"machines to keep them from spreading apart. "* * * This brace and socket or bearing in or "on brace is in one piece. * * * Figure 1 rep- "resents platform 'A' and treadle-bar, the ends of "which *may* be V-shaped or *any shape to suit,* "marked 'B.'"

So far from placing any limitations and provisos on his invention in this specification Cramer actually broadened his language in order to make it more nearly commensurate with his actual invention. He practically says that his invention consists in the combination of the treadle and brace; also he practically says that the treadle bearings are mounted in or on the brace and that the ends of the treadle-bar, styled in the subsequent specifications *trunnions,* may be V-shaped, *or any shape to suit.* In other words, he did not confine his bearings to those of the knife-edge form. He only said they might be of that form, and then added that they may be *of any shape to suit.*

The only thing in this amended specification partaking of a limitation is the inclusion of the mufflers as an element in the claim; but we have already shown the probable way in which the claim was drawn by unskilled attorneys having no knowledge of the patent law or patent office practice. So that it is quite apparent that the inclusion of these muf-

fiers in the claim was due entirely to ignorance of patent law. Subsequent events prove this surmise. In any event the claim was afterwards broadened and not narrowed in order to get the patent.

In answer to this amended specification the patent office sent the following letter:

"United States Patent Office,
"Washington, August 14th, 1882.

"Treadle. Filed May 25th, 1882. No. 62,397.

"HERMAN CRAMER, care Street & Street, Sonora, Cal.:

"Applicant's amended claims are met by the pat-
"ent to J. E. Donovan, June 28, 1881, No. 243,529,
"in view of which a patent is again refused."

Upon receipt of this communication Cramer and his country attorneys evidently concluded that they had gotten beyond their depth and that patent practice was not their forte; for the next thing that Cramer did was to take the case out of the hands of Street & Street and appoint Munn & Co., of New York, his solicitors, as appears by the following communication in the files.

"I hereby appoint O. D. Munn and A. E. Beach,
"the firm of Munn & Co., of the cities of New
"York and Washington, or their accredited agents,
"to withdraw the specifications and drawings of my
"application for letters patent for sewing machine

" treadle filed on or about May 25, 1882, serial No.
" 62,397, and to make such amendments and to the
" same extent transact such other business with the
" department pertaining to this application as is vest-
" ed in Messrs. Street & Street, of Sonora, Cal.,
' whose power of attorney attached to the specifica-
" tion aforesaid, is hereby revoked."

From this time on everything was plain sailing. Munn & Co. amended the old specification by erasing everything above the signature and filing an entirely new specification in its stead, which constitutes the specification of the patent as allowed.

In this new specification they disclaimed the V-shaped bearings in as plain words as can be found in the English language, and they separated Cramer's omnibus claim into two separate and independent claims in order to protect the two independent inventions.

In connection with this new specification Munn & Co. filed an argument which is as follows:

"Gregory, referred to, pivots the grooved trun-
" nions of his treadle upon knife-edges secured with-
" in the upper loops of two collars, which are se-
" cured to the cross-bar by means of set-screws to
" keep them from turning. Donovan pivots his
" treadle upon its trunnions having sharpened edges,
" in grooves in the cross-bar, where it is held by col-
" lars provided with flanges projecting over the trun-

"nions. Applicant pivots his treadle upon the "sharpened edges of its trunnions in loop-holes in "the two ends of the brace which is bolted to the "legs of the machine by the two ends of the cross-"bar. This service of the cross-bar might be as well "performed by two short bolts; but the bar being a "usual cross-tie to stiffen the legs, applicant uses "its ends as bolts to hold his brace ends to the legs. "We have rewritten the specification to elucidate "the inventor's claim. Should the case meet with "favorable consideration a new drawing will be "furnished. For the purpose of examination see "pencil sketch on sheet of drawing filed.

"Your ob't servants, MUNN & Co."

In this argument Munn & Co., pointed out the fact that in the references cited by the examiner the treadle was mounted on the tie-rod, whereas Cramer mounted his treadle in the vertical brace.

The examiner again rejected the application in the following communication:

"The case has been reconsidered in connection "with the substituted specification filed the 17th "inst., and the examiner holds that the references "previously cited—that of Gregory in particular— "meets the alleged invention. The case is accord-"ingly rejected." Signed by the Examiner.

Thereupon Munn & Co. filed with the examiner the following argument:

"The examiner will please take notice that ap-
"plicant's invention places both bearings of the trea-
"dle in the cross-brace. By this means they may be
"made perfectly true in line, either by casting or
"drilling, and they cannot be thrown out of line
"either by use or by the most awkward setting up.

"Therefore, one source of friction is avoided. All
"the references shown have bearings made of two
"separate pieces which could readily be set up out
"of line or even be worked loose. The advantage is
"obvious.

"A reconsideration is respectfully asked.

"Your obedient servants,

"MUNN & CO."

In this argument Munn & Co. point out very clearly the essence of the Cramer invention, showing that it consists substantially in mounting the treadle in the vertical brace, whereby the bearings "may be "made perfectly true in line either by casting or "drilling, and they cannot be thrown out of line "either by use or by the most awkward setting up."

This argument proved conclusive, and the patent was allowed. It will be observed that Cramer's application was originally rejected on the patent of Gregory of 1882, and that of Donovan of 1881.

If these references had borne any relevancy to the Cramer invention, they could have been avoided by an affidavit of priority. We have already seen that

Cramer's invention was made in June, 1880. Consequently, neither Gregory nor Donovan could limit the scope of that invention. Probably Munn & Co. were not aware of the fact that Cramer's invention was made as early as 1880, and therefore, they showed to the examiner that said invention was not anticipated by Gregory or Donovan. In this theory of no anticipation they were undoubtedly correct, for neither Gregory nor Donovan shows the Cramer invention. In neither of those references is the treadle mounted in the vertical brace. On the contrary, they show the treadle mounted on the tie-rod and in the legs by the use of knife-edge bearings. It was evidently by reason of the use of knife-edge bearings in these prior references that the examiner cited them against Cramer, and it is apparent that the examiner misconceived the Cramer invention at first. He thought it consisted in the use of knife-edge bearings, and this belief was induced by the loose expressions contained in the original specification. But Munn & Co. showed to the examiner that the invention did not consist in the use of knife-edge bearings and they put into the patent an unequivocal disclaimer thereof. As soon as this was done the examiner allowed the claim.

We thus see that throughout all the patent office

proceedings Cramer consistently "stuck to his text," arguing and successfully maintaining that his invention consisted in mounting the treadle in the vertical brace. Through the ignorance of his attorneys he first proposed no claim at all, then an omnibus claim for the whole machine, which was necessarily a narrow one, and finally a broad claim which was allowed. There is absolutely nothing in this file wrapper placing Cramer in the category of those inventors who first ask for a broad claim, and when cited to anticipations, narrow their claim in order to avoid the references. On the contrary, we think it manifest that Cramer broadened his claim, instead of narrowing it, and during his entire journey through the patent office consistently adhered to the position which he now contends for.

Before leaving this branch of the case, one other matter demands attention, and that is

JUDGE MCKENNA'S DECISION IN CRAMER *vs.* FRY, 68 FED., 201.

Were we disposed to be technical and narrow-minded, we might argue that said decision of Judge McKenna should not be considered by this court, inasmuch as it was rendered by a *nisi prius* court, and the construction of the patent therein adopted

was afterwards disapproved by the court of appeals. But, in view of the known ability of the learned judge who rendered the Cramer-Fry decision, as well as the fact that he is now an honored member of this court, a due respect for the proprieties impel us to waive all technicalities, and to say a word concerning the merits of that decision.

The gist of that decision is that the Cramer invention is an exceedingly narrow one, limited to the specific devices shown, and is not entitled to the doctrine of equivalents to any extent whatever.

In determining whether one case is conclusive of another, the first and primary question is: Are the facts of the two cases the same? The law depends on the facts, and it is not infrequent to see the same patent sustained in one case and avoided in another, by reason of variance in the facts of the two cases. A notable instance of this is found in the cases of the "driven-well" patent. In *Eames* vs. *Andrews,* 122 U. S., 40, and *Beedle* vs. *Bennett,* Id., 71, this court, on the facts there presented, held the patent valid. But in the subsequent case of *Andrews* vs. *Hovey* (123 U. S., 267), on a different state of facts, the patent was held invalid. Naturally, therefore, the first question which arises here is whether or not

the facts shown in the Fry case are substantially the same as in the case at bar.

There is nothing in this record to show that the facts proven regarding the scope and character of the Cramer invention are the same as those proven in the Fry case. None of the testimony which was taken in the Fry case—other than certain depositions on the subject of anticipation, hereinafter noted—was put in evidence in the present case, and we are wholly in the dark as to what was the evidence on that subject in the Fry case. The judgment-roll from the Fry case was put in evidence; but that consisted merely of the pleadings, verdict, and judgment, and does not enlighten us on the subject. It shows what were the issues raised, but not what was the evidence adduced in support of those issues.

Under these circumstances, how is it possible for the Cramer-Fry decision to have any controlling effect here? So far as this record shows, it may be that the only evidence adduced in that case was the Cramer patent and the infringing structure, without any evidence whatever from experts explaining the two constructions as to similarities and differences, and without any evidence as to the date of Cramer's invention or the state of the art. In a word, there is

nothing to show that the evidence in the two cases was substantially the same. If the defendant desired to invoke the decision in the Fry case, it was its duty to put in evidence not only the judgment-roll, showing that the *issues* were the same, but also the transcript of the reporter's notes of the evidence taken at the trial of the Fry case, in order to show that the *facts* likewise were the same, or substantially the same. This was not done. Only the judgment-roll was put in evidence.

As a matter of fact, the evidence in the two cases was as different as black is from white, and there is no question in our minds that, if the evidence in the case at bar had been introduced in the Fry case, the decision of Judge McKenna would have been the same as the decision of Judge Morrow. It cannot be presumed that two such eminent trial judges would render diametrically opposite decisions on the same state of facts, and the only reasonable view to take of the Cramer-Fry decision is, that it was not based on the same evidence and facts as the case at bar.

On reading the Cramer-Fry decision, it will be seen that the learned judge there presiding examined merely the Cramer patent on its face and the file-

wrapper contents, and from those premises deduced the conclusion that the invention was an exceedingly narrow one, and, consequently, that the claim must receive a narrow construction, limited to the exact details shown, and not entitled in an manner whatever to the doctrine of equivalents. If the evidence in that case had shown, as it does in the case at bar, that the actual invention made by Cramer was a broad one; that, prior to his invention, all treadles for sewing machines had been mounted either in the legs or on the tie-rod, by means of cones and set-screws, and that both of said old styles of mounting were liable to serious objections; also, that Cramer was the first in the art to mount a treadle in the vertical brace, and that by such construction he obviated the defects of the prior art in that regard, then it is apparent that the conclusion drawn in the Fry case would have been a *non sequitur*. Who is there will attribute to his Honor, Judge McKenna, such faulty reasoning on such statement of facts? Certainly not ourselves; for we have too high a regard for his judicial attainments. The authorities cited by him in the Fry case are invoked by us in this behalf. They hold that where the invention is a broad one, it must receive a broad construction;

where narrow, a narrow construction. The evidence alone can determine the scope of the actual invention. Hence it is reasonable to conclude that the evidence in the Fry case tended to show a narrow invention. But in the case at bar, beyond all question, the evidence tends to show a broad invention.

Again, suppose that at the trial of the Fry case Cramer's models of June, 1880, had been introduced in evidence, and that the testimony of himself, his son, and his daughter, which is uncontradicted, showing that his invention was made as early as June, 1880, had been adduced, who is there can doubt that this would have had a controlling influence on the decision? We do know this much from the record in the present case, that the defendant in the Fry case produced depositions from many witnesses at Chicago tending to show that a treadle mounted on point-centers in the vertical brace, substantially in the same way as the present mounting of the treadle in the Singer machine, was used by George Bent, at Chicago, in the years 1881 and '82. We know this because those same depositions were by stipulation, admitted in evidence at the trial of the case at bar. (Rec., 229 *et seq.*) Those depositions undoubtedly tended to show anticipation of the

broad feature of the Cramer invention, and it must be assumed that the trial judge in the Fry case gave full faith and credence to the same in holding that Cramer's invention was a narrow one. There is no evidence here to show that at the trial of the Fry case said anticipating evidence was met in any way whatever, whereas the record does affirmatively show that at the trial of the case at bar said evidence was successfully met and completely overthrown by conclusive proof of the fact that the Cramer invention ante-dated, by at least one year, the said anticipating evidence. This fact alone is a sufficient answer to the Cramer-Fry decision, for it must be conceded that if said anticipating evidence had been successfully met in the Cramer-Fry case, the learned judge who tried it could not have held that the Cramer invention was a narrow one. In view of all these facts, it follows that the Cramer-Fry decision must be thrown out of consideration, on the ground that it does not appear to have been based on the same facts as the case at bar. It is not necessary for us to review or attempt to overthrow that decision. It may even be conceded to be correct on the facts presented therein, just as the decision of this court in *Eames* vs. *Andrews* must be conceded to be cor-

rect on the facts there presented. But the fate of the patent may be changed in another case on a different state of facts, as was done in the case of *Andrews* vs. *Hovey*. It was solely on account of this different state of facts that the present suit was brought.

The truth of the matter is, that the Cramer-Fry case was improperly presented on behalf of the plaintiff. The proper evidence was not supplied; the vital facts were not shown; and it is not to be wondered at that on such a maimed and impotent record the court decided as it did. But the case at bar is on a different footing. The proper evidence has been supplied. The vital facts have been shown. In a word, this case is presented on an entirely different state of facts from those shown in *Cramer* vs. *Fry*.

Another point must be remembered: this case comes from the lower court by writ of error in an action at law. Consequently, the burden is on the Singer Company to show affirmatively that the Cramer-Fry case was tried on the same facts as the case at bar before they can invoke that decision. Not only have they failed to do this, but they have not even attempted it. He who alleges error must show

it affirmatively, and cannot rely on inference or conjecture in that regard.

Again, no error can be urged except by way of a specification of error, and there is no specification of error in this record aimed at this particular point.

THE INFRINGING MACHINE.

Having disposed of the matter of the construction of Cramer's claim, we come now to the crucial point in the case, a comparison of the defendant's structure with the Cramer patent.

The defendant's machine, which is charged to be an infringement, is made under letters patent No. 306,469, issued to the Singer Manufacturing Company, as assignee of Philip Diehl, October 14, 1884. It is hereinafter referred to as the "Diehl machine."

Before analyzing this machine, it may not be out of place to recall the salient facts leading up to the infringement. Cramer applied for his patent on May 25, 1882, and it was issued on January 30, 1883. On February 8, 1883, Cramer sent to the Singer Manufacturing Company the following letter, shown at page 46 of Record, viz:

"Sonora, Cal., Feb. 8, '83.

" The Singer Mfg. Co.

"Dear Sirs: Having invented one of the most

"improved sewing machine treadles, I desire to call "your attention to its merits. To make your ma- "chine the most complete of any sewing machine in "the market, I think you should embody my im- "provement in your machine.

"My patent treadle consists of a brace and treadle "working in combination with each other. It is "frictionless as can be, noiseless, self-adjusting, al- "ways in line, most cheap, never needs readjusting, "does away with cones and set-screws and makes the "machine run a great deal lighter. I desire to sell "my patent, reserving the right to put them on all "machines I sell or to have you put them on your "machines and give me a royalty.

"Yours truly, H. CRAMER."

Two important facts are to be noticed in connection with this letter. The first is the statement, in substance, that the invention consists of *a brace and treadle* working in combination with each other, which clearly shows the construction placed by Cramer upon his invention at that time, and that is substantially the same construction which we are now urging. The second fact we note is that this letter called the attention of the Singer Company to the Cramer invention at the very earliest possible moment after the patent was granted, thereby giving them full opportunity to be informed of the same

and precluding any theory of "innocent infringement."

In answer to this letter, the Singer Company wrote Cramer the following:

"Office of the Singer Manufacturing Company, No.
"34 Union Square, New York, Feb'y 20th, 1883.
"Mr. H. Cramer—

"Dear Sir: Replying to yours of 8th inst., would "say that we receive copies of all sewing machine "patents as they issue. As soon as yours is out, if "after examination, we find anything of value in it "that we care to adopt, we will communicate with "you farther on the subject.

"Yours truly, THE SINGER MFG. CO.,
"W. F. Proctor, V. Prest." (Rec. 47.)

It would appear from this letter that the Singer Company had not at that time secured a copy of the Cramer patent, but it shows that they were intending to secure a copy as soon as possible.

The Singer Company had no further communication with Cramer concerning this matter, but they immediately put to work on the matter their head mechanic, Mr. Philip Diehl. Mr. Diehl was a mechanical expert in the factory of the Singer Company at Elizabethport, New Jersey, whose business appears to have been to get out patents for the company. (Rec., 161.) We find that on May 29, 1884,

Mr. Diehl filed his application for the patent which is herein charged to be an infringement, and assigned the same to the Singer Manufacturing Company. How long he was at work in devising and perfecting the invention does not appear from the record; but it is not a very violent presumption to indulge in that he was supplied with a copy of the Cramer patent and was told to devise an improved device of mounting the treadle in the vertical brace. Anyway, that is precisely what he did. The Diehl patent was issued on October 14th, 1884, and immediately thereafter the Singer Company began to place the device on the market. They had on hand at the time a large number of machines embodying the old method of treadle mounting, which it was necessary to dispose of first. That old form of treadle mounting was dispensed with by the sale of the stock on hand, and thereafter all the standard machines of the Singer Company were equipped with the Diehl device, and no change has been made to this day.

The device used by the Singer Company immediately preceding the advent of the Diehl device consisted in mounting the treadle in the legs of the machine, which, of course, was liable to the serious ob-

jections heretofore spoken of. The mounting which they had used prior to this last-named one was on the tie-rod with cones and set-screws. We therefore have the following suggestive facts in chronological order:

1. In 1880, the Singer Company was mounting its treadle on the tie-rod by means of cones and set-screws.

2. This style of mounting was found to be defective, and they changed it to a mounting in the legs, which form they used in 1881-2-3.

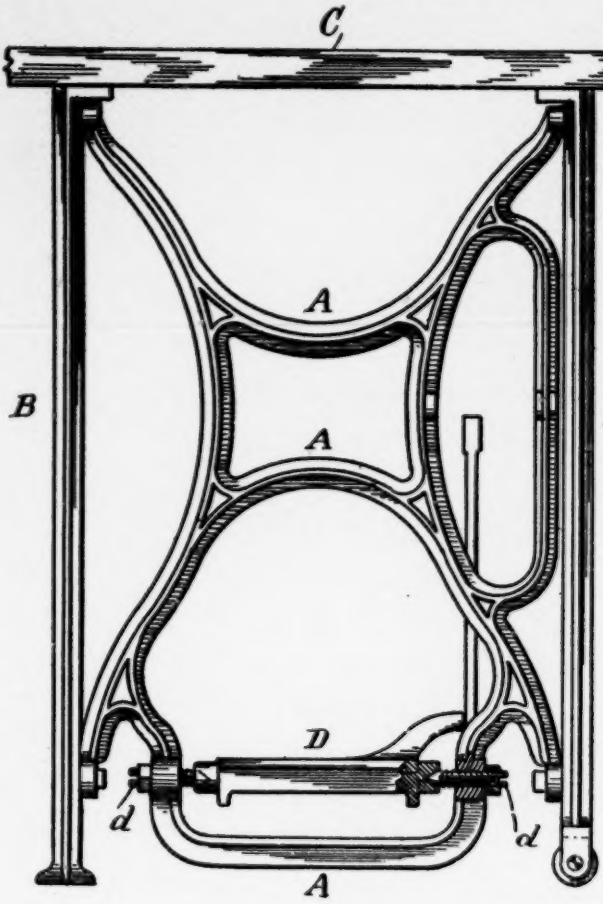
3. This style of mounting likewise was found defective, and the company was endeavoring to find a better one.

4. In January, 1883, the Cramer patent was issued, and the attention of the Singer Company was specially called thereto by the inventor.

5. Immediately following this, the mechanical expert of the Singer Company was set to work devising a new treadle mounting, and it is highly probable that in so doing he carefully studied the Cramer patent and got his ideas therefrom.

6. In May, 1884, the Singer Company, through Diehl, perfected a device for mounting the treadle in

The Diehl Machine, Infringing Device.



the vertical brace, and applied for a patent, which was issued in October, 1884.

7. This last treadle mounting overcame all the defects of the former ones used by the Singer Company, and proved to be highly efficient.

8. The Singer Company has continued to use said last named treadle mounting to this day, without any change, and has sold many millions of machines embracing the same.

While it is true that an infringement is an infringement, whether it be induced by inadvertence or design, nevertheless a willful and premeditated infringement is without any palliation whatever, and we have recited the above facts for the purpose of showing that the Singer Company embarked in this infringement with a full knowledge of the rights of Cramer, and apparently with the intent and design of appropriating the substance of his invention without right.

On the adjoining page will be found a cut, showing the stand of the infringing machine as illustrated by the Diehl patent. We have taken the liberty of lowering the cross-bar "A" a trifle further than it is lowered in the patent. We do this merely for the purpose of more clearly illustrating the device. It

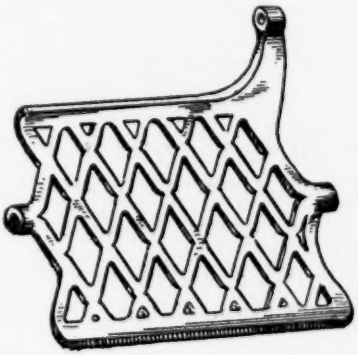
does not alter any of the principles of the machine whatever. In fact, it is stated in the patent that this cross-bar may be cut away entirely. In this Diehl machine there is found a double vertical brace joining the two legs of the sewing machine. This brace is a little different in form from the one shown in the Cramer patent drawing, but that fact is immaterial. It differs also in another unessential particular in being connected at its two lower ends by the cross-bar "A," which is made integral with the brace. The object of this cross-bar is to stiffen the structure, and the same office is performed in the Cramer machine by a tie-rod "D," the only difference between the two being, that in Cramer's case the tie-rod is not integral with the vertical brace. At the lower end of Diehl's brace, there are two lugs or projections cast with and constituting the lower end of the brace. Through the lower end of each of these lugs a threaded hole is made, and a screw-bolt with a pointed end is passed from the outside through the hole. The following cut will show the form of said screw-bolt:

Screw Bolt of Diehl's Machine.

The treadle is made with a short stumpy lug or projection on each side, corresponding to a trunnion, and in the end of each lug a counter-sunk conical hole is made, and the pointed ends of the screw-bolt are fitted therein, so that the treadle will oscillate up and down upon these bearings. Such a bearing is known in mechanics as a point-center bearing. It was old and well known in the art at the date of the Cramer invention.

The following cut represents the Diehl treadle, taken from the model of the defendant's machine which was put in evidence, and which is clearly represented by the cuts marked 101 and 102 in the 1885 circular of the Singer Manufacturing Company, opposite page 52 of the record.

Diehl's Treadle With Screw Bolts Removed.



It will be seen that the Diehl treadle is mounted in the double vertical brace, on point-center bearings, and of this there can be no dispute. The Diehl patent says this treadle is supported in the lower portion of said brace.

And in the Singer catalogue of 1885 it is said of the Diehl machine:

"The band wheel and treadle have their bearings
" entirely independent of the stand (or legs), there-
" by assuring a correct adjustment and easy action.
" This device prevents the 'building' which so often
" follows a slight displacement of the support of the
" machine, a difficulty rarely appreciated except by a
" skilled mechanic, which hitherto it has been con-
" sidered impossible to remedy."

And in another place in its catalogue, the Singer Company says that the treadle is "entirely supported " within the brace, insuring accurate adjustment and " ease of operation."

In the Diehl patent, the band-wheel is also mounted in the brace, and this is the only patentable feature in the Diehl machine, unless it be that invention may be predicated of the special form of brace shown, which is immaterial to this controversy. A reference to the claims of the Diehl patent will show that they are framed with the idea of

covering, broadly, mounting both the band-wheel and the treadle in the vertical brace. In other words, Diehl recognized at once the advantage of mounting the treadle in the brace as soon as he saw Cramer's patent, and he carried that idea a little further and conceived that a like advantage would follow if he mounted the band-wheel also in the vertical brace. In this he was clearly correct, and he secured a patent for the broad idea of mounting both treadle and band-wheel in the brace. Diehl adopted Cramer's fundamental idea of mounting the treadle in the brace, but effected that mounting by a different species of bearings, to-wit: point-center bearings, and the question is whether Diehl has so far taken the substance and essence of the Cramer invention as to amount to infringement.

In the Cramer machine, the treadle is provided with lugs or projections on each side, termed in the specification, trunnions. These devices are sharpened underneath into the form of a knife-edge, and project into V-shaped holes in the ends of the vertical brace, thereby presenting an illustration of that form of bearing known as a knife-edge bearing. The mechanical change which Diehl made was this: He took a Cramer treadle and cut off the trunnions

at the point where they are attached to the treadle, then inserted these trunnions from the outside, through holes in the lower ends of the vertical brace, and changed the knife-edge of these trunnions to a pointed end, at the same time placing conical holes in the treadle at the point where the trunnions had formerly been. In the Cramer construction, the bearings, technically so-called, are located in the brace, and they are of the knife-edge kind. In the Diehl construction, the bearings, technically so-called, are located in the treadle, and they are of the point-center kind. Thus we see that Diehl merely changed from knife-edge to point-center bearings, and reversed the position of those bearings.

These changes were merely structural, not functional, and did not avoid infringement. As far as the bearings are concerned, the point is too plain for argument. At the date of Cramer's invention, both knife-edge and point-center bearings were old in the art. (See testimony of Seely, Rec., 121-2.) The patent of Wilcox & Gibbs shows the existence of knife-edge bearings in a sewing machine stand as early as 1870. (Rec., 214.)

The patent of Lawlor, dated in 1882 (Rec.,.216), shows the identical threaded screw-bolt with point-

center bearings used in the Diehl construction, and it is beyond all dispute that such point-center bearings were old in mechanics prior to 1880. Beyond all controversy, therefore, knife-edge bearings and point-center bearings are mechanical equivalents. They both performed the same function in the same manner. The jury so decided as a question of fact. Neither Cramer invented the one, nor Diehl the other. They were both old in the art, and each inventor found them ready for use. Cramer selected one as the preferable form, while Diehl selected the other. Therefore, when Diehl changed Cramer's knife-edge bearings into point-center bearings he certainly did not, so far as the bearings themselves are concerned, avoid the Cramer patent, because he merely substituted for one of the elements of Cramer's claim a mechanical equivalent thereof. Were any confirmation needed for so palpable a proposition, we have merely to refer to the testimony of expert witnesses Seely and Brown.

At pages 121-2, Seely says:

"Many years before Cramer's time they were well "known mechanical equivalents of each other for all "purposes. One of them might, perhaps, be better "for a given purpose than the other, but it is a mat- "ter of choice entirely."

Brown says, at page 164:

"Point-center bearings and knife-edge bearings "were both old in the art prior to this. Ever since I "have known anything about them they have been "in existence, and long before that. You could sub- "stitute in the art one for the other, and produce the "same result. It is a matter of taste which one "would be used. Some persons might prefer a "knife-edge bearing, and others might prefer a "point-center bearing."

Regarding the other formal change which Diehl made, that likewise presents no difficulty. He changed the location of the bearing point from the brace to the treadle, without producing any change of function or result, or any new mode of operation. It was merely a reversal of parts.

In the case of a gate hook, it is immaterial whether the hook be attached to the gate, and the staple through which it is intended to pass be attached to the gate-post, or whether the staple be attached to the gate and the hook to the post. It is immaterial whether the male part of the hinge be fixed to a door and the female part to the door-post, or whether those parts be reversed as to position. It is a favorite trick with infringers to reverse the two parts which go to make up the combination, hoping thereby to

Fig. 1.

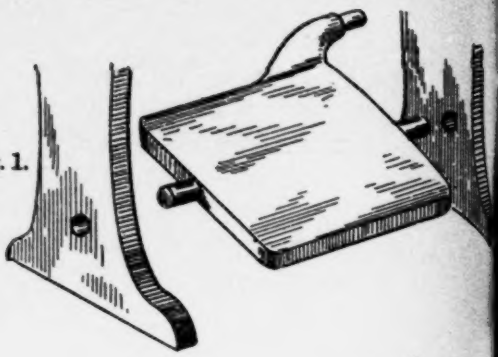


Fig. 2.

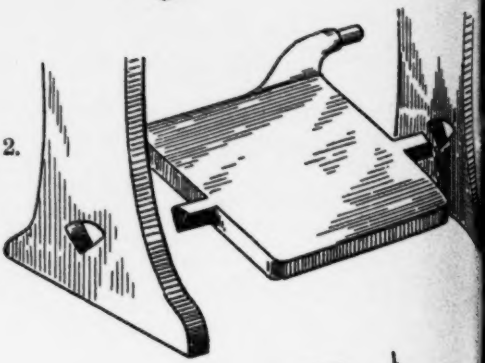
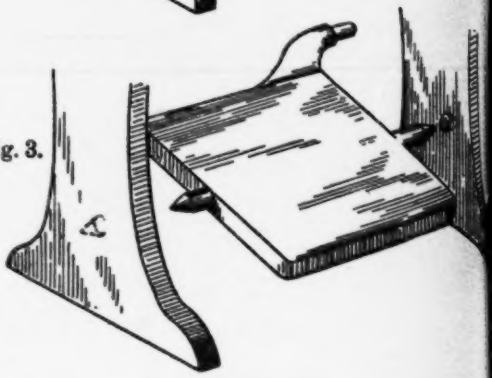


Fig. 3.



Showing Different

nting.

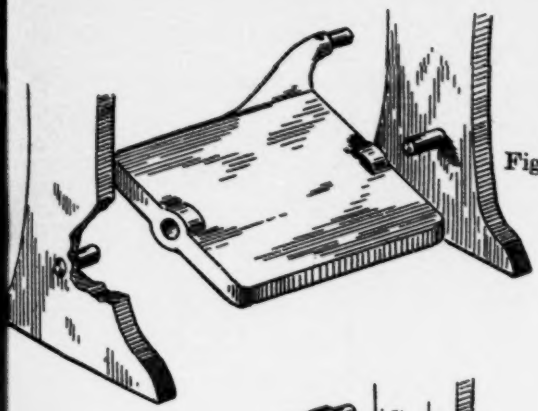


Fig. 4.

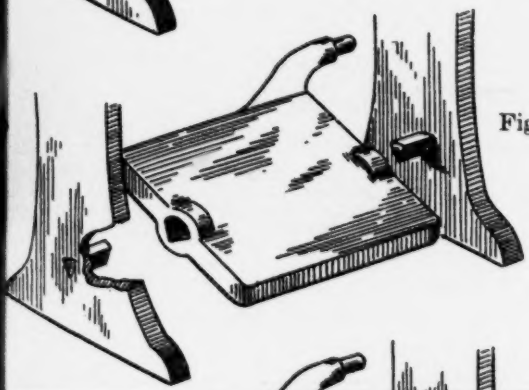


Fig. 5.

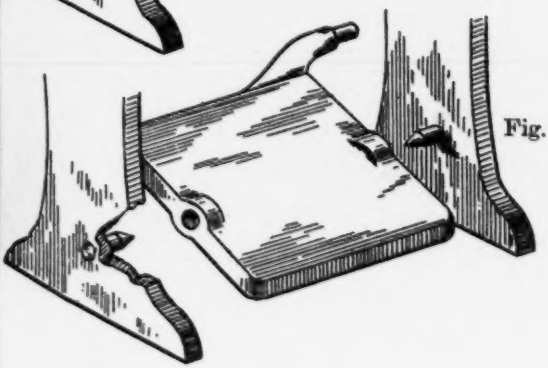


Fig. 6.

avoid infringement, but the law is too just to tolerate such practice.

In order to more clearly illustrate the precise matter in hand, consider for a moment the two columns of figures on the annexed insert. The first figure in the left-hand column represents a treadle with a trunnion cast on each side made in the form of a round journal, that is to say, a technical trunnion. In the two side pieces, round holes are bored, and when the trunnions of the treadle are inserted into these holes the treadle will oscillate up and down. This figure illustrates the form of bearing known as common journal bearings, sometimes as pin bearings. It was old in the art at the time of Cramer's invention, and he might have adopted it if he had seen fit.

It is clear, beyond all dispute, that if such a construction were used, it would be an infringement of Cramer's claim.

The second figure in said column represents the trunnions of the treadle formed into knife-edges, and the holes made V-shaped. When these knife-edges are inserted into the holes, the treadle will oscillate up and down just as before, and presents the case of a treadle mounted on knife-edge bearings. This

form of bearing was old at the time of Cramer's invention, and was the mechanical equivalent of the journal bearings.

The third figure represents a treadle with trunnions having pointed ends adapted to fit in the conical holes shown. When so fitted, the treadle will oscillate up and down just as before, and we then have an instance of point-center bearings. These, likewise, were old at the date of Cramer's invention, and were a mechanical equivalent for the other two forms.

There can be no question that such a construction as that shown in the third figure would be a plain and palpable infringement of Cramer's claim, because it would be nothing more than the substitution of point-center bearings in place of knife-edge bearings.

Advancing a step further in the argument, consider now the three cuts shown in the second column of the inset. The first one of these is the same as figure 1 of our first set of cuts, except that the trunnions have been cut off from the treadle and inserted from the outside, through the holes in the side piece, and a round hole has been bored in the treadle where the journal was formerly located. Insert these trunnions into the treadle holes, and the treadle will

oscillate as before. There has been merely a reversal of parts.

In figures 5 and 6 the same thing has been done, and yet all of those devices will operate in precisely the same way as before. Who is there will deny that the corresponding figures of these two sets of drawings are the mechanical equivalents of each other? If figure 6 in the second set, which is the construction of the Diehl machine, is the mechanical equivalent of figure 3 of the first set, then it is clearly the mechanical equivalent of figure 2 of the first set, which is Cramer's construction. Things equal to the same thing are equal to each other, is a mathematical axiom, and it was applied by this court to the law of patents in the case of *Machine Co.* vs. *Murphy* (97 U. S., 120).

We submit that the only mechanical difference between Cramer and Diehl is a mere reversal of two parts of the combination, without any change in result or mode of operation. It is well settled by the law that a mere reversal of parts, or change of location of elements, without producing any new result, does not avoid infringement.

In the leading case of *Machine Co.* vs. *Murphy* (97 U. S., 120), one device consisted of a moving

knife and a stationary table, while the other device consisted of a stationary knife and a moving table. They were held to be mechanical equivalents, notwithstanding such reversal of parts; and in rendering the opinion of this court, Mr. Justice Clifford used the following emphatic language:

"Except where form is of the essence of the invention, it has but little weight in the decision of such an issue, the correct rule being that in determining the question of infringement, the court or jury, as the case may be, are not to judge about similarities or differences by the names of things, but are to look at the machines or their several devices or elements in the light of what they do or what office or function they perform and how they perform it, and to find that one thing is substantially the same as another if it performs substantially the same function in substantially the same way to obtain the same result, always bearing in mind that devices in a patented machine are different in the sense of the patent law when they perform different functions or in a different way, or produce a substantially different result. Nor is it safe to give much heed to the fact that the corresponding device in the two machines organized to accomplish the same result is different in shape or form, the one from the other, as it is necessary in every such investigation to look at the mode of operation or the way the device works, and at the result as well as at the means by which the result is attained. * * *

"Authorities concur that the substantial equivalent "of a thing, in the sense of the patent law, is the "same as the thing itself; so that if the two devices "do the same work in substantially the same way, "and accomplish substantially the same result, they "are the same, even though they differ in name, "form, or shape."

This is the same rule of law that was applied by the court in *Winans* vs. *Denmead* (15 How., 330), and *Hoyt* vs. *Horne* (145 U. S., 308). In the latter case, a certain device called a "mid-feather" was represented as being in a horizontal position, and the infringer had changed it to a vertical one. This court said, through Mr. Justice Brown:

"The substitution of a vertical for a horizontal "mid-feather at the inoperative end of the tub is "merely the use of an old and well known mechan- "ical equivalent, and obviously intended to evade "the wording of the Hoyt patent."

Paraphrasing the language quoted, we might very properly say the substitution of a point-center bearing for the knife-edge kind is merely the use of an old and well known mechanical equivalent, and "ob- "viously intended to evade the wording of the "claim" of the Cramer patent.

In *Ives* vs. *Hamilton* (92 U. S., 426), we find an-

other instance of reversal of parts. The claim read as follows:

"Giving to the saw in its downward movement a "rocking or rolling motion by means of the com- "bination of the cross-head working in the *curved* "guides at the upper end of the saw, the lower end "of which is attached to a cross-head working in "straight guides and pivoted to the pitman below "the saw, with the crank-pin, substantially as de- "scribed."

The defendant's machine did not show *curved* guides, but two straight lines, representing two consecutive chords of the curve in the patentee's guide. It also connected the lower end of the saw to the pitman *below* the cross-head, instead of *above* it. These two changes were analogous to the two changes made by Diehl, viz: substitution of point-center for knife-edge bearings, and a reversal in the position of the bearing points.

Mr. Justice Bradley said:

"The substitution of guides at the top, made "crooked by a broken line, instead of a curved line, "is too transparent an imitation to need a moment's "consideration. * * * The attaching of the lower "end of the saw to the pitman below the cross-head "instead of above it, and thereby getting the same "movement as before by reversing the motion of the

"crank, is no change in principle. This is too obvi-
"ous for discussion. The combination of the two
"things in defendant's mill * * * is a close
"copy of the plaintiff's invention, quite as close as
"is usually made by those who attempt to evade a
"patent whilst they seek to use the substance of the
"invention."

Were we permitted to paraphrase this language and apply it to the case at bar, we would say: The substitution of point-center for knife-edge bearings is too transparent an imitation to need a moment's consideration. The placing of the trunnion in the brace and the bearing point in the treadle, instead of placing the trunnion in the treadle and the bearing point in the brace, and thereby getting the same movement as before by reversing the location of these parts, is no change in principle. This is too obvious for discussion. The combination of the two things in the defendant's machine is a close copy of the plaintiff's invention, quite as close as is usually made by those who attempt to evade a patent whilst they seek to use the substance of the invention.

Another instance of reversal of parts is *Valve Co.* vs. *Crosby* (113 U. S., 158).

There can be no question that the only difference between the Cramer and Diehl constructions is the

change from knife-edge to point-center bearings and a reversal of position of the bearing points; but both treadles are mounted in the brace; both accomplish the same result of keeping the bearings at a fixed distance apart; both do this by the same movement or mode of operation; and both make use of the same fundamental idea.

Instances of reversal of parts are quite numerous in the lower courts. Thus, in *Develin* vs. *Paynter* (64 Fed. Rep., 398), the device involved was a union of steam pipes, consisting of a head member having a seat of soft metal with a concave face, and a tail member having a convex face. The infringer had reversed these parts by putting the convex face on the head member and the concave face on the tail member, and the soft metal seat on the convex face instead of on the concave face. This was held to be a mere reversal of parts, and did not avoid the charge of infringement. In rendering the opinion of the court, Judge Acheson said:

"The differences between the union shown by the "patent in suit and the appellant's union are these: "In the latter the convex face is on the head mem- "ber, and the concave face is on the tail member, re- "versing the arrangement of the patent; and in the "appellant's union the convex face is composed of

"soft metal, whereas in the union described in the "patent it is the concave face which is of soft metal. "The appellants have transposed the position of the "soft metal face. Do they escape infringement by "the transposition of parts? We think not."

In the case of *Societe, etc.*, vs. *Rehfuss*, 75 Fed. Rep., 658, the invention consisted of the combination of a stationary tool holder and a movable chuck. The defendant had used a movable tool holder and a stationary chuck. In other words, he had merely reversed the position of the parts. The court said:

"The defendants have simply reversed the order "of the patent, without any change in the principle "of operation or in the result; but in the eye of the "patent law these two forms are substantially the "same thing, and a claim for one includes the other "as its manifest equivalent."

In *Harmon* vs. *Struthers* (57 Fed., 443), we find another instance of reversal of parts, and Judge Acheson found no hesitation in adjudging infringement.

The same patent was involved in a subsequent case between the same parties in 57 Fed. Rep., 638, wherein one of the expert witnesses said:

"The only change the defendant has made is a "mere change in location of the slot. But this is a

" change merely in position. It does not change the " result or the principle of the operation."

Concerning this testimony, Judge Acheson said: " These views, we think, are correct."

In *McEvilla* vs. *Hall* (43 Fed. Rep., 139), the only difference between the patented and infringing devices was the location of certain parts. Judge Nelson held this to be immaterial.

In *Adams* vs. *Manufacturing Co.* (3 B. & A., 1) and *Reece Buttonhole Machine Co.* vs. *Globe Buttonhole Machine Co.* (61 Fed. Rep., 958), we find additional instances of mere reversal of parts. The latter case involved a sewing machine patent wherein there was a moving stitching mechanism and stationary plate, whereas the defendant used a stationary stitching mechanism and moving plate. This reversal of parts was held, on the authority of *Winans* vs. *Denmead,* to be immaterial, and infringement was adjudged. If that case is good law, it disposes of the case at bar, because the analogy is too apparent to admit of question.

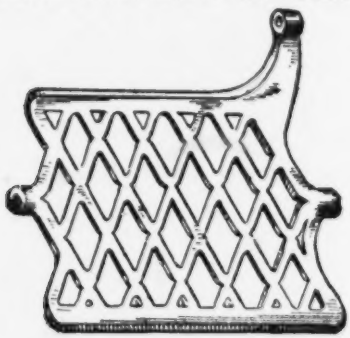
But there is another aspect in which this matter may be viewed; of a technical nature, it is true, but still a sound one; and as our learned adversaries rely

strongly on technicalities, we feel justified in presenting this matter to the court.

It is claimed by them that their treadle has no trunnions. Permit us to examine this contention analytically.

The following cut, taken from plaintiff's Exhibit P, and from the cuts in the Singer catalogue, represents the infringing treadle.

Diehl's Treadle with Screw Bolts Removed.



Is this a treadle provided with trunnions? Undoubtedly it has lugs or projections on each side, after the analagy of the trunnions of a cannon. They differ in form from Cramer's in that they are not knife-edged; but that is immaterial in view of Cramer's disclaimer as to knife-edge bearings and of the further fact that knife-edge bearings are the equivalents of point-center bearings.

It may possibly be urged that these projections are not trunnions because they do not rest in boxes and oscillate therein, as in the case of a cannon. We have seen, however, according to Knight's Mechanical Dictionary, that the essential attributes of trunnions are that they shall form " supports for the piece " and an axis on which it turns during elevation and " depression."

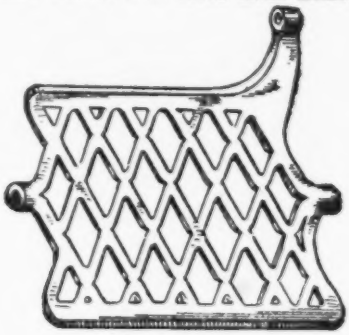
Those are the two attributes of trunnions, and determine whether or not a device, by whatever name called, is a trunnion. Both of these attributes are found in the Singer treadle. Beyond all question the two projections in said treadle constitute supports for the piece; that is to say, supports for the treadle, because the points of the screws enter the conical cavities in the ends of the trunnions, and the treadle hangs thereon, *i. e.*, is supported thereby.

As to the second attribute of a trunnion, viz., forming an axis on which the piece turns, it is apparent that the Singer treadle meets this requirement as truly as the Cramer treadle does. Technically an axis is the imaginary line about which a rotating body turns, as for instance, the axis of the earth. In this sense there is as much of " an axis on which it turns " during elevation and depression " in the Singer case

as in the Cramer case. Therefore, according to the strict letter of the claim the Singer treadle is provided with trunions, or the equivalents thereof.

But in order to place this matter beyond the pale of doubt we again resort to diagrams. The first one is a reproduction of the Singer treadle.

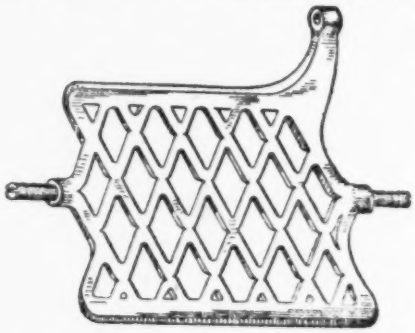
Diehl's Treadle with Screw Bolts Removed.



We have already endeavored to show that the projections on the sides of this treadle are trunnions, or at least the equivalents of trunnions, because they possess the two essential attributes of trunnions, viz., forming supports for the treadle and an axis on which the treadle turns during elevation and depression. If, however, we be wrong in this, there can be no question that when the point center screw bolts are applied in place, and the treadle is mounted, then the treadle is "provided with trunnions."

To mount this treadle the screw bolts are passed through the holes in the lower ends of the vertical brace, and their pointed ends are extended into the conical sockets in the sides of the treadle, as represented by the following diagram:

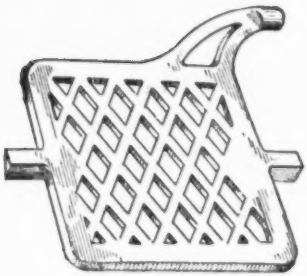
Diehl's Treadle With Screw Bolts in Place.



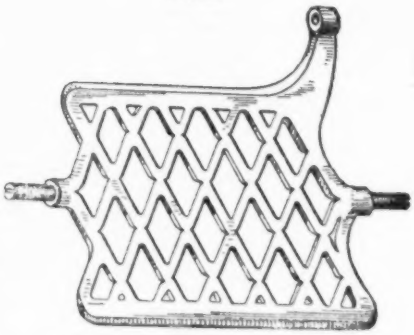
Is not this a "treadle provided with trunnions"? If we are to be guided by the definition from Knight's Mechanical Dictionary, it certainly is, because the bolts support the treadle and constitute an axis on which it turns during elevation and depression.

But barring technicalities and verbal refinements, and viewing the matter in the light of ordinary common sense, is not the above construction the substantial equivalent of Cramer's? Place the two constructions side by side as illustrated in the following diagrams:

Cramer



Diehl.



The only difference that can possibly be suggested is that in Cramer's case the trunnion is cast in one piece with the treadle, and the bearing point is at the outer end of the trunnion in the brace, whereas in Diehl's case the trunnion is cast in a separate piece from the treadle, and the bearing point is at the inner end of the trunnion in the treadle. But we have already shown by many decisions that the mere reversal in position of the bearing points is immaterial in the eyes of the patent law. We shall now show that where a patent calls for a structure consisting of two parts cast in one piece, infringement is not avoided by casting the two parts in separate pieces and subsequently uniting them together to act in combination.

In *Wheeler* vs. *Clipper Mower and Reaper Com-*

pany, 10 Blatch., 193, S. C. 6, Fisher 1, the essential feature of the invention was a hinged metal bar. Its function was two-fold, while in the defendant's machine two separate devices were used to accomplish those two purposes. It was merely a case of dividing the patented device into two parts, which two parts, when combined, effected the same result as the patented device, and Judge Woodruff so ruled, saying:

"A patent for a device cannot be avoided by di-
"viding it into two parts, which, when combined,
"produce the same result in substantially the same
"way."

In *Strobridge* vs. *Lindsay,* 6 Fed. Rep., 510, we find a stronger case. The invention was a coffee mill, and the claim was a "detachable hopper and grind-
"ing shell formed in a single piece," etc. On final hearing the defendants had been enjoined. (2 Fed. Rep., 692.) Thereafter they changed the form of their mill by casting the hopper and shell in two pieces and then bolting them together. It was insisted by them that such construction was no infringement, "in that it does not have a detachable hopper
"and grinding shell formed in a single piece, but on
"the contrary, that the hopper and grinding shell
"thereof are separate constructions."

This argument found no favor with Judge Acheson, who disposed of it by saying:

"Manifestly the sole object is to produce a mill of "which it can be affirmed that the hopper and grind- "ing shell are not cast integral or formed in a single "piece literally. But 'the letter killeth'; and if the "justice of the case is not to be sacrificed, regard must "be had to the spirit rather than the phraseology of "Strobridge's first claim. Surely the plaintiff's suc- "cess was a barren victory if by such an alteration "as the one here adopted the injunction of this court "can be evaded."

"But the expedient must fail of its purpose. The "change is but colorable. Although cast in two "pieces, yet when put together for use the hopper "and the grinding shell are substantially and for all "practical purposes formed in a single piece. If au- "thority is needed for the proposition that a patent "cannot be defeated by dividing the patented de- "vice into two parts, which when combined produce "the same result in substantially the same way, it "will be found in *Wheeler* vs. *Clipper Mower and* "*Reaper Company,* 6 Fisher, 2."

The same point was ruled in *Roots* vs. *Hyndman,* 6 Fisher, 440, where the device consisted of a rotary blower case cast in a single piece. The defendant had made his blower case in two pieces and then joined them together. Judge Emmons said of such a construction:

"A machine in all respects like the complainant's "with the exception of a useless division of the short- "ened arcs by casting them in two pieces, would be "an infringement without any doubt whatever.

The case was appealed to the Supreme Court, and there affirmed. Mr. Justice Swayne, in delivering the opinion of the court, was most emphatic in his condemnation of the infringer and used the following vigorous language:

"The appellees (patentees) * * * confine "their claims to improvements in the shell or case "of blowers. * * * They say the objects of "their invention were to avoid the necessity of bor- "ing out the interior concave surfaces of the case, "and of facing off or planing the head-plates, and "to render it practicable to *cast the outside casing in "one piece.* * * * The appellant's (infringer's) "case is *cast in two parts.* * * * Why is this? "And what are his object and purpose? We can "imagine none but to gather where another had "sown, and escape by simulation and subterfuge the "consequences which the act of Congress has pre- "scribed for the unlawful appropriation of such "property. * * * The proofs leave no doubt "in our minds that the appellant is guilty of the in- "fringement of this claim."

Hyndman vs. *Roots*, 97 U. S., 224.

The latest case we can find is that of *Westinghouse*

vs. *New York Air-Brake Co.*, 59 Fed. Rep., 581, decided in November, 1893, by the circuit court for the southern district of New York. There the same question was decided. Without going into details, it will suffice to quote a few sentences from page 596:

"The question is whether this combination of devices is the same as the device of the complainants. "It seems to me that it is. The component parts of "the combination operate together to perform the "same function and to produce the same result. It is "merely dividing complainant's piston into two "parts, so arranged that the action of one necessarily "causes the action of the other in the same way as "though they were one."

The learned judge then goes on to quote authorities as follows:

"A patent for a device cannot be avoided *by dividing it into two parts, which, when combined, produce the same result in substantially the same way.* * * * With reference to the object in view—the raising and the lowering of the fingers, which is the usual purpose contemplated—the effect is identical. The means * * * are substantially the same, and they operate * * * in substance, in the same manner. To hold otherwise would be to give immaterial variations capacity practically to destroy the value of any patent whatever. Judge Woodruff in *Wheeler* vs. *Reaper Co.*, 10 Blachf., 181. In the case of *Strobridge* vs. *Lind-*

" *say,* 6 Fed., 510, a case somewhat similar to the one " at bar was presented. The complainant was the " owner of a patent for a coffee mill. The claim in " suit was for 'a detachable hopper and grinding " 'shell, formed in a single piece,' etc. The defend- " ants, having been enjoined, made a new mill in " which the hopper and grinding-shell were cast sep- " arately. Judge Acheson held that this did not " avoid infringement, and said:

" 'The change is but colorable. Although cast in " 'two pieces, yet when put together for use, the hop- " 'per and grinding-shell are substantially, and for all " 'practical purposes, "formed in a single piece." '

" The same view was held by the supreme court of " the United States in *Robertson* vs. *Blake,* 94 U. S., 728."

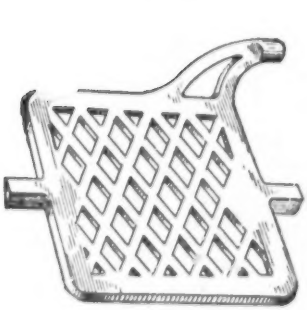
This decision was affirmed by the court of appeals of the second circuit (*Westinghouse Air-Brake Co.* vs. *N. Y. Air-Brake Co.,* 63 Fed. Rep., 926), and was followed by Judge Lacombe on motion for preliminary injunction in a suit between the same parties, reported in 65 Fed. Rep., 99.

The rule of law enunciated in the foregoing citations seems applicable to the matter in hand. The Cramer patent shows the treadle and trunnions cast in a single piece and the claim is for " a treadle pro- " vided with trunnions." The defendant has severed the trunnions from the treadle, so that they constitute

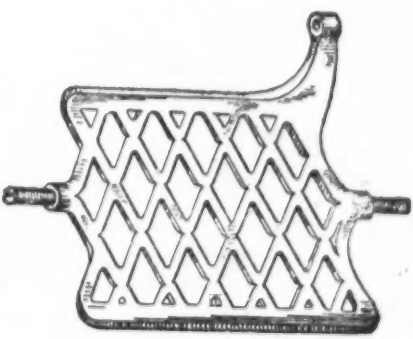
two pieces, instead of one integral structure; but when the machine is set up for operation, these severed parts are united together to work in combination for the production of the same result as before. In other words, the Cramer device, consisting of a treadle and trunnions cast in a single piece, "cannot "be avoided by dividing it into two parts, which "when combined produce the same result in sub-"stantially the same way."

Consider again for a moment diagrams of the two devices:

Cramer



Diehl.



It is too palpable to admit of argument that Diehl has simply cut off the Cramer trunnions from the treadle, and by a slightly different arrangement of the bearing points, which is not material, has re-

united those severed parts together and caused them to work in combination to produce the same old result. It may be true that when a Diehl treadle is taken out of the machine and viewed alone and by itself, it has no trunnions, because they have been cut off; but it is equally true that when the Diehl treadle is fixed in place in the machine, it is provided with devices which perform all the functions of trunnions; that is to say, (1) they act as supports for the treadle, and (2) they constitute an axis on which the treadle turns during elevation and depression. The matter comes squarely within the rule announced by this court in *Machine Co.* vs. *Murphy*, 97 U. S., 120, where it is said:

"Nor is it safe to give much heed to the fact that "the corresponding device in the two machines or- "ganized to accomplish the same result is different "in shape or form, the one from the other, as it is "necessary in every such investigation to look at the "mode of operation or the way the device works, "and at the result, as well as at the means by which "the result is attained. Authorities concur that the "substantial equivalent of a thing, in the sense of the "patent law, is the same as the thing itself, so that "if the two devices do the same work in substantially "the same way, and accomplish substantially the "same result, they are the same, even though they "differ in name, form or shape."

FURTHER EVIDENCE OF INFRINGEMENT.

There is one bit of evidence in the record which to our mind is conclusive of the question of infringement. It is particularly valuable in that the Singer Company produced it, and that is the matter of the Bent machine.

In the answer of the defendant it is set up as a defense that the Cramer patent was anticipated by George P. Bent and others at the city of Chicago. (Rec., 18.)

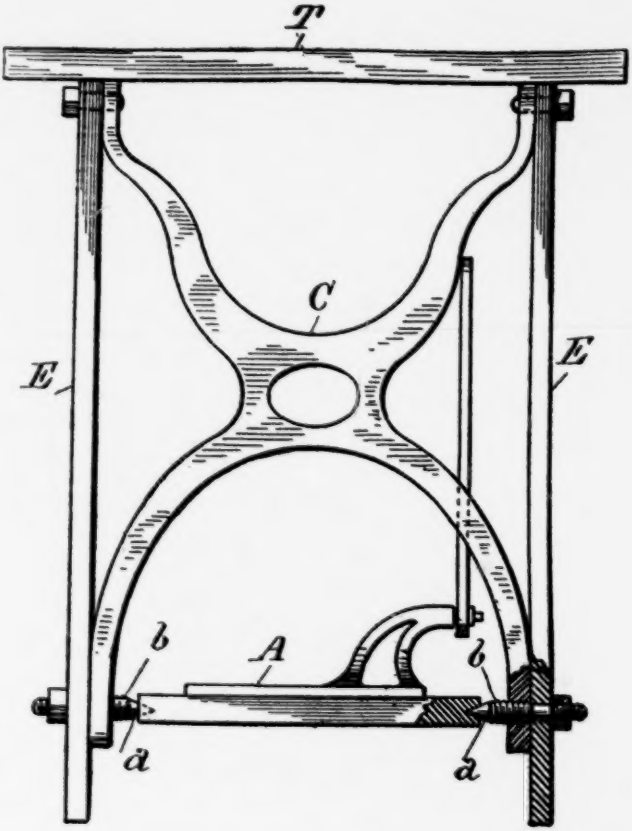
In order to sustain this defense defendant took the depositions of George P. Bent (Rec., 229), Susan Dilworth (Rec., 236), William H. Matchett (Rec., 238), Walter Skates (Rec., 246), William Walmsley (Rec., 252) and John Elliott (Rec., 254.)

These witnesses testified to the manufacture and use of a sewing machine in Chicago. Bent said on direct examination that "such use was in the winter "of 1880-1"; that is to say, in December of 1880 and January and February of 1881. On cross-examination he said: "Now as to whether these patents "were complete in December, 1880, January, Feb- "ruary, March or April, 1881, I cannot positively "swear, but I began to advertise machines with "stands made from these original patterns during the

"year 1881." (Rec., 235.) And he produced a catalogue issued by himself in 1882, showing the construction in question, which seems to be the first publication of the same, according to his own testimony. (Rec., 231.) He made no actual sales of the machine until 1881.

The other witnesses testified that as near as they could tell the Bent machine was first made and sold in 1881, and the sales continued during the year 1882. It is reasonably certain, therefore, we take it, that these Bent machines were not placed on the market until 1881.

The cut on adjoining page is a reproduction of a drawing put in evidence by the defendants, showing the construction of the Bent device. It shows a treadle with countersunk conical holes in the sides thereof, and point center screws passed through the lower ends of the vertical brace, with their points resting in the conical holes of the treadle. This is the same construction as that of Diehl, shown in the Diehl patent and embodied in the infringing machine. There can be no question that if this Bent device were early enough in time, it would anticipate the broad feature of the Cramer claim for which we


T
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have been contending; but it was *not* early enough in time. The Cramer invention was made in June, 1880, practically about one year before the Bent machines were put on the market. Therefore, Bent's machine does not anticipate Cramer's in time, but is subsequent thereto. It is well settled that a device which would anticipate, if prior, will infringe, if subsequent to the patented invention. This rule is so elementary that our learned adversaries will not deny it. Now the Bent device, being subsequent in time to the Cramer invention, would be an infringement if made and sold after the date of the Cramer patent, and as the Diehl device is the same as that of Bent, it must follow that the Diehl device is an infringement, and this, too, according to the views advanced by our learned adversaries. Was not this some evidence of infringement, and as such, was it not proper to go to the jury? The defendant stood convicted out of its own mouth, and yet it is now seriously urged by the defendant that there was *no evidence whatever* of infringement in the case. It is not often that a defendant furnishes weapons for his own destruction, but in this case we cannot escape the conclusion that the defendant has committed suicide.

Perhaps we have already said enough on this sub-

ject to show that there was *some* evidence of infringement in the case, sufficient to go to the jury, and anything further may appear unnecessary; but we cannot forbear adding a word to show that the "idea of means" embodied in the Diehl patent is in substance the same "idea of means" embodied in Cramer's. For this purpose we place in parallel columns extracts from the two specifications:

EXTRACTS FROM CRAMERS' SPECIFICATION.	EXTRACTS FROM DIEHL'S SPECIFICATION.
1. I, Herman Cramer, of Sonora, in the county of Tuolumne, and State of California, have invented a new and improved sewing machine treadle.	1. I, Philip Diehl, of the city of Elizabeth, in the county of Union, and State of New Jersey, have made an invention of certain new and useful improvements in sewing machine stands and treadles.
2. My invention relates to improvements in the bearings of sewing machine treadles.	2. My invention relates to an improved sewing machine stand.
3. And it has for its object to provide means, first, to keep the treadle bearings rigidly in line at a fixed distance apart to avoid friction; and, second, to make its movements noiseless.	3. Its object is to secure a permanent and reliable support and adjustment for both the band-wheel and treadle and to preserve their respective relative positions so that they will always co-operate to produce the best results with the least danger of friction or binding.

4. Fig. 1 is a perspective view of a portion of a sewing machine showing my invention. Fig. 2 is a transverse section of the treadle. A represents the treadle provided with the usual pitman connection by which to run the sewing machine wheel. B represents the two trunnions cast as a portion of the treadle and extending from its sides into loopholes in the common cast-iron cross-brace C. These trunnions are sharpened to an edge or corner along their lower side, and the lower end of the loophole is hollowed to an angle more obtuse than the edge of trunnion to serve as a bearing for the same and permit the rocking motion common to treadles.

4. In the drawings, Fig. 1 is a face view of such a stand, and Fig. 2 an edge view of the brace within which I support both the band-wheel crank and treadle. C is the ordinary table top of the sewing machine; B the upright legs or stand-sides; A the usual brace connecting the same and serving to stiffen and secure the frame, as well as to perform the specific and additional function hereinafter explained.

5. C represents the usual cast-iron double brace connecting the two end legs diagonally in a plane generally vertical. The lower ends of this brace are secured directly to the web of the leg by the bolts d, and for convenience and strength I make the two ends of

5. This brace is formed, substantially as shown, with a loop within which the band-wheel can act, and on the sides of which are provided conical bearings for the shaft which supports the band wheel, and which is preferably bent so as to form a crank. To this

the common cross-bar D, serve as these bolts; the upper ends of the brace are secured, as usual, either to the web of the legs or to the table, near the legs. The treadle and its trunnion bearings are wholly independent of the cross-bar D, except its service, as stated, to hold the brace to the legs. The bearing holes in the brace are formed into long vertical loops.

6. Below the bearings of the trunnions, B, I provide cups, M, attached to the ends of brace, C, to catch the oil that usually drips from such bearings. By this construction my treadle bearings are rigidly fixed, and in no way liable to get out of line or to require adjustment. The usual noise is prevented, and overflowing oil is caught before it can do damage.

I am aware that sewing machine treadles have before been provid-

crank is attached an ordinary pitman, which, at its lower end, is pivotally connected to an ordinary rocking treadle. This treadle is supported in the lower portion of said brace, which I prefer to make as shown, forming practically another loop, the lower end of which is the cross-bar on which the treadle is hung. This cross-bar may, however, be omitted and the treadle hung directly on downward projections from the brace.

6. My invention is shown as applied to a stand adapted for use in supporting and driving a Singer I. S. sewing machine; but I do not confine myself to any particular form of stand, the essential part of my invention being the providing of supports for both the band-wheel and the treadle, which are integral with the brace, so that when said band-wheel, with its driving crank, and said treadle have been hung within said brace and connected by a

ed with V-shaped bearings, and I do not claim the same as my invention.

suitable pitman, their adjustment to and relationship with each other are practically permanently secured.

Means are provided for taking up ordinary wear in the band-wheel shaft by the cone-bearings *a a* and the screw *b*, and in the treadle by the conical-pointed screws *d* acting in suitable bearing recesses. By this arrangement any twisting or other alteration in the fitting or connections between the brace and the legs, or between any of the several parts of the sewing machine stand, will neither affect the hanging, adjustment, or relationship of the sand band wheel and treadle, and, in fact, the lower driving apparatus of the sewing machine is, by my invention, absolutely secured against any accident short of the breaking or forcible distortion of the brace itself. This brace, being built strongly and preferably with a a rib, as shown, is not at all likely to be injured in ordinary use or by ordinary handling.

There is no doubt that Diehl's patent shows the new idea of hanging a band wheel in the vertical brace. This band wheel had formerly been hung in the legs or sides. Diehl thought it was a good idea to hang it in the brace, just as Cramer, years before, had thought it a good idea to hang the treadle in the brace. Consequently, Diehl added to the Cramer idea of hanging the treadle in the brace, the additional idea of hanging the band wheel in the brace, thereby producing a stand in which both the band wheel and treadle are hung in the brace. With these facts in mind, permit us to compare Cramer's and Diehl's ideas as to the brace and treadle, shown by the extracts above quoted from their respective patents.

In Extract 1, Cramer says he has invented "a "sewing machine treadle"; Diehl says "sewing "machine stand and treadle."

In Extract 2, Cramer says his invention relates to "improvements in the bearings of sewing machine "treadles." This does not mean the V-shaped bearings, for those he disclaimed, but must refer to everything necessarily connected with the adjustment of the treadle to the brace. Diehl says that his relates to "an improved construction of sewing ma-

" chine stand." This, if taken literally, would cover the entire stand, from the top board to the floor. It, therefore, is nothing more than one of those glittering generalities frequently indulged in by infringers.

In Extract 3, Cramer says his object is to " keep " the treadle bearings rigidly in line and at a fixed " distance apart to avoid friction." Diehl says his object is to secure a " support for both band wheel " and treadle, and to preserve their respective rela- " tive positions so that they will always co-operate " to produce the best results with the least danger of " friction and binding."

In Extract 4, Cramer points out in his specification the " treadle A, the trunnions B extending into " brace C." He describes the construction of the V-shaped bearing and its seat. Diehl points out " the " brace within which I support both the band wheel " crank and treadle," his table top C, the legs B and " the usual brace connecting the same (legs) " and serving to stiffen and secure the frame as well " as to perform the specific and additional function " hereinafter explained." This function is to support the band wheel and treadle.

In Extract 5, Cramer points out " the usual cast- " iron double brace," describes its connection with

the legs, and says " the treadle and trunnion bearings " are wholly independent of the cross bar E, except " its service as stated to hold the brace in the legs." And also, " the bearing holes in the brace are formed " into long vertical loops." Diehl describes his brace, and then proceeds: " This treadle is supported in " the lower portion of said brace, which I prefer to " make as shown, forming practically another loop, " the lower end of which is the cross bar on which " the treadle is hung." His next sentence is as follows: " This cross bar may, however, be omitted " and the treadle hung directly on downward projec- " tions from the brace." This last sentence clearly establishes what Diehl's idea was. It shows that his idea was not treadle and cross bar, as counsel claims, but treadle and brace; for he says, " this cross bar " may, however, be omitted," leaving " the treadle " hung directly on the downward projections of the " brace." Here he repudiated the cross-bar idea. He says the cross bar is not necessary. He here reveals the idea he has in his own mind of his own invention, his " idea of means " to be employed to produce his result. He virtually says, " Take a hammer and " break out the cross bar under my treadle and my " invention remains intact."

In Extract 6, Cramer says, " By this construction " my treadle bearings are rigidly fixed and in no way " liable to get out of line or to require adjustment," and he then explicitly disclaims the V-shaped bearing. Diehl says " the essential part of my invention " being the providing of support for both the band " wheel and treadle, which are integral with the " brace." Clearly if the supports for the band wheel and treadle be integral with the brace, then the treadle must rest in or on the brace in this integral support.

Diehl then continues, " So that when said band " wheel and its driving crank and its said treadle " have been hung within said brace and connected by " suitable pitman, their adjustment to and relation- " ship with each other are practically secured." Notice that this assurance of relationship and adjustment is to be an accomplished fact, "when the said " band wheel and its driving crank and treadle have " been hung within the brace and connected by pit- " man."

Diehl then proceeds: " Means are provided for " taking up the wear in the band wheel shaft by the " cone-bearings *aa* and the screw *b*, and in the treadle " by the conical pointed screws *d* acting in suitable

"bearing recesses." This is his first mention of the point-center bearings for the treadle, the equivalent of Cramer's knife-edge bearings. This part of the specification is dextrously drawn to throw these point-centers as far as possible in the background. It is not stated that they are to serve as bearings for the treadle connecting it to the brace. They are merely means "provided for taking up ordinary "wear." When he speaks of the band wheel supports in the brace, he says that on the sides of the brace "are provided conical bearings for the shaft "which supports the band wheel." Nowhere in the specification does he refer directly to any means of supporting the treadle. If the question were asked how he intended to support his treadle, his answer would be to look at the drawings where the support is clearly shown. That support consists of point-center bearings, but the skilled attorneys who drafted the specification were evidently aware of the old proverb, "Least said soonest mended."

Diehl's specification then proceeds as follows: "By this arrangement any twisting or other altera- "tions in the fittings or connections between the brace "and the legs or between any of the several parts of "a sewing machine stand will neither affect the

"hanging, adjustment, or relationship of the said "band wheel and treadle, and in fact the lower driv- "ing apparatus of the sewing machine is by my in- "vention absolutely secured against any accident "short of the breaking or forcible distortion of the "brace itself."

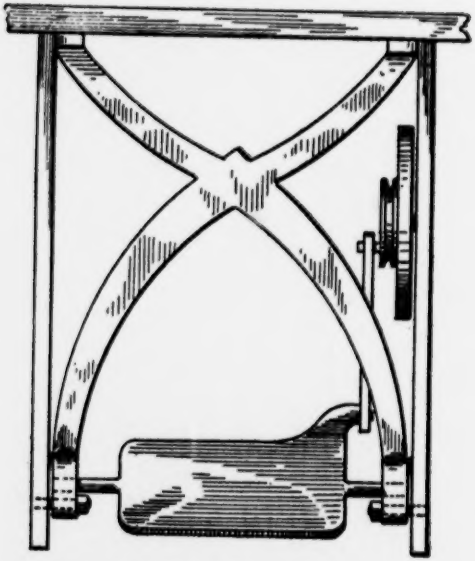
Why will not this twisting between the legs and the brace or other alteration in the fittings or connections between them affect the hanging, adjusting or relationship of the said band wheel and treadle? Simply because they are both hung in the brace and are independent of the legs or other parts of the machine. This is obvious.

Diehl further says, "the lower driving apparatus "of the sewing machine is by my invention absolutely "secured against any accident short of breakage or "forcible distortion of the brace itself." That is to say—"Break out the bar under my treadle, break "part of my legs, but leave the vertical brace alone "and my treadle and wheel will remain intact; my "invention has not been disturbed until the brace "itself has been broken or distorted so as to jam the "wheel and treadle."

In the specifications of both Cramer and Diehl it is stated that the lower cross-bar is not material,

since it is used merely as a strengthening bar or bolt. In each case this cross-bar may be omittetd. To illustrate the idea clearly, we have reproduced on the adjoining page cuts of the two stands with the cross-bar in each case removed, leaving the treadle mounted directly in the vertical brace, and we have added below each figure the statement taken from each specification as to the right to remove this cross-bar. The two cuts show clearly the essential idea of means in each case. They are one and the same, to wit: the mounting of the treadle directly in the vertical brace. Cramer mounts his by means of knife-edge bearings, simply because he considered that form of bearing best. He disclaimed it as being any part of his invention, and is, therefore, entitled to use any form of bearing in that connection. Diehl mounts his treadle in the vertical brace, but by means of point center bearings, because he considered that to be the best form of bearing to use. The evidence is uncontradicted to the effect that at the time of the Cramer invention knife-edge bearings and point-center bearings were equivalent. Consequently, Diehl has appropriated the Cramer idea of means, and the only variation he has made is to substitute one equivalent for another.

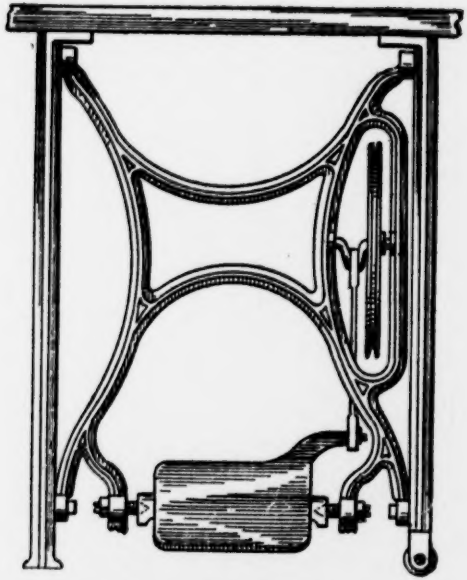
Cramer's Cross Bar Removed.



Extract from Cramer's specification:

"The treadle and its trunnion-bearings are wholly independent of the cross-bar D, except its service, as stated, to hold the brace to the legs."

Diehl's Cross Bar Removed.



Extract from Diehl's specification:

"This cross-bar may, however, be omitted and the treadle hung directly on downward projections from the brace."

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In this connection and as additional evidence on the point at issue we refer to the statement in the Singer catalogues which were put in evidence. One of them says of the Diehl construction:

"The band wheel and treadle have their bearings "entirely independent of the stand (or legs), thereby "assuring a correct adjustment and easy motion. "This device prevents the 'building' which so often "follows a misplacement of the supports of the ma- "chine, a difficulty rarely appreciated except by a "skilled mechanic, which hitherto it has been consid- "ered impossible to remedy. This distinctive fea- "ture of the Singer machine is of great importance "to the health and comfort of the operator," etc., etc.

At another portion of the same catalogue, it is said:

"Both the band-wheel and the treadle work upon "adjustable centers which admit of accurate adjust- "ment with a minimum amount of friction. This "distinctive feature renders ours the lightest running "of any sewing machine stand yet constructed and "is a matter of great importance to the health and "comfort of the operator."

In another circular, which was put in evidence, it is said of a cut of the Diehl stand:

"It also shows the new (patented) and light run- "ning stand upon which all our family machines are

" mounted, the band-wheel and treadle entirely sup-
" ported within the brace, insuring accurate adjust-
" ment and ease of operation."

In view of the foregoing comparisons of the two specifications in connection with the said circulars it would be a dull and stupid intellect, indeed, which could not detect that the "idea of means" contained in the Singer machine consisted, amongst other things, in mounting the treadle in the vertical brace, and if this is the "idea of means" embodied in the Cramer device, then the two are the same in that respect. In any event it was a proper question to be submitted to the jury, and *per force,* the court did not err in so submitting the same.

It will be observed that we have discussed this question of infringement upon its merits, as if it were an open question before a trial court, or as if this were an appeal in an equity case where the appellate court is entitled to try the case *de novo.* We have done this in order to show that the decision of the lower court was correct on the merits, but we again beg leave to say that this is not an appeal in an equity case, and therefore, the defendant is not entitled to a hearing *de novo.* This case comes up by writ of error, and it is only necessary for us to show

that there was *some* evidence of infringement. The burden was on the defendant to show that there was *no evidence whatever of infringement.* If, therefore, this court is not convinced by what we have said, it must certainly be convinced that the question of infringement was at least a debatable one and that the theory of no infringement was not so palpable and clear as to authorize the lower court to withdraw the case from the jury.

While the evidence on many points in our favor was undisputed, it was conflicting on other points, and the experts on the two sides gave opposite views as to the meaning of technical terms and the construction of the Cramer claim as rival experts always do. It cannot be denied that where there is conflicting evidence on any material point, the case must be submitted to the jury, and if the judge in this case had complied with the defendant's request and taken the case away from the jury, his act would have been an unwarrantable interference with the prerogative of the jury, and a deprivation of the plaintiff's right to a trial by jury guaranteed to him by the seventh amendment of the federal constitution.

In closing this part of the brief we reproduce that portion of the decision of the court of appeals bear-

ing on the point in controversy. We see no escape from its logic. It reads as follows:

"One of the assignments of error principally relied "on by the plaintiff in error is that the court refused "to give a peremptory instruction to the jury at the "close of the evidence to find for the defendant. "This instruction was asked upon the ground that "'no infringement had been shown.' Whether or "not it was error to refuse the instruction depends "upon whether there was any evidence whatever of "infringement, which if credited by the jury, would "have justified their verdict. It is contended on be- "half of the plaintiff in error that the claim of the "patent which is sued upon calls for a combination "of elements, all of which were old, and that the "court could plainly see from an inspection of the "Diehl patent that it omitted substantial features of "the patent upon which the action was brought. "We find in the record evidence which went to the "jury tending to show that the essential and impor- "tant feature of the Cramer patent was the location "of the treadle supports in the vertical cross-brace "which connected the legs or side pieces of the ma- "chine, and that such location in the cross-brace was "new with the Cramer invention. There was also "evidence tending to show that by so locating the "treadle a better alignment of the treadle could be "kept and maintained, and that the tendency of the "machine in operation to loosen the joints which "hold its legs in position, thereby displacing the "treadle, was overcome. The evidence was that "theretofore the treadle had been mounted in the

" legs or side pieces of the machine, or on a cross-rod " connecting the legs, but never before had been in- " serted in the vertical cross-brace. In addition to " other evidence of the utility of the plaintiff's inven- " tion, and of its novelty, was the evidence afforded " by the admissions and declarations of the plain- " tiff in error. It was shown that shortly after ob- " taining his patent on February 8, 1883, Cramer " submitted to that corporation the claims of his in- " vention and endeavored to sell it his patent. In the " following year Diehl, who was an employe of the " Singer Company, obtained his patent upon his de- " vice, which also places the bearings of the treadle " in the vertical cross-brace. The advantage of this " construction of treadles under the Diehl patent was " promptly published to the world by the Singer " Company. Its catalogue, 1885, exhibits cuts of " machines with the treadles hung in the vertical " cross-brace, and thus refers to them: 'The balance- " 'wheel and treadle have their bearings entirely in- " 'dependent of the stand (or legs), thereby assuring " 'a correct adjustment and easy action. This device " 'prevents the "building" which so often follows a " 'slight displacement of the supports of the ma- " 'chine, a difficulty rarely appreciated, except by a " 'skilled mechanic, which hitherto has been consid- " 'ered impossible to remedy.' In another circular " is shown a cut of a machine containing the treadle " mounted in a vertical brace, accompanied with " these words: ' It also shows the new (patented) " 'and light-running stand, upon which all our fam- " 'ily machines are mounted, with band-wheel and " 'treadle entirely supported within the brace, insur-

" 'ing accurate adjustment and ease of operation.' In " its catalogue of 1889 the company said: 'These " 'bearings being entirely within the brace, the ad- " 'justment is not affected by any strain which may " 'be put upon the stand.'

" But it is contended that inasmuch as the claim of " the Cramer patent is for a combination of elements, " all of which were old, the patent is not entitled to " the doctrine of equivalents, but must be confined " to the form which is presented in the claim and " specifications. It is urged that the Diehl patent " presents material variations from those forms, so " material as to avoid the charge of infringement. It " is said that the Diehl patent uses point-center bear- " ings instead of knife-edge bearings with trunnions, " which are essential features of the Cramer patent. " The trunnions in the Cramer patent are projections " upon the sides of the treadle in its axis, and their " purpose is to afford the knife-edge bearings upon " which the treadle turns. In the Diehl patent there " are no such projections, the treadle at the point of " axis turns upon point-center bearings, that is to say, " upon pointed screws which are inserted through " holes in the vertical cross-brace, and are set in holes " countersunk in the treadle. There was evidence " before the jury that these screws in the Diehl " patent, upon which the treadle turned, were the " mechanical equivalents of the knife-edged bear- " ings and trunnions of the Cramer patent, and that " by inserting the screws through the cross-brace in " the Diehl device, the same result was secured by a " reverse method that was secured in the Cramer de- " vice. If the evidence was true that Cramer was the

"first to present a new and useful combination by "mounting his treadle in the vertical cross-brace, "thereby obtaining the advantages which some of "the witnesses testified to, he was undoubtedly en- "titled to the protection of that combination and to "the exclusive right to mount a treadle in the cross- "brace, no matter what the form of the bearings of "the treadle might be. This view is fully sustained "by the general doctrine of the decisions. (*Winans* "vs. *Denmead,* 15 How., 330; *Ives* vs. *Hamilton,* 92 "U. S., 426; *Machine Co.* vs. *Murphy,* 97 U. S., "120; *Hoyt* vs. *Horne,* 145 U. S., 308.)

"It is earnestly contended that, inasmuch as the "claim of the Cramer patent calls for a 'treadle pro- "'vided with trunnions,' that the trunnions are made "an essential feature of the construction of the trea- "dle and that there can be no infringement by a trea- "dle which has no trunnions. We do not think, "however, that the court should have taken the case "from the jury upon that ground. In order to mount "the Cramer treadle in the vertical cross-brace upon "knife-edged bearings, it was absolutely necessary "that it be provided with trunnions or the equivalent "thereof.

"The trunnions in this case are the knife-edges of "the bearings, no more and no less. There could be "no such bearings without the projections, by what- "ever name they may be called. If the patentee was "entitled to the doctrine of mechanical equivalents "and to the protection of the right to mount his trea- "dle in the vertical cross-brace with bearings, "whether knife-edged or point-center, his right is "certainly not affected or diminished by the use of

" the words 'provided with trunnions,' as found in " his claim, provided that the jury found, as they " may have done from the evidence, that the one ele- " ment of his combination, which consisted in mount- " ing the treadle in the cross-brace, was new, and that " the bearings used in the Diehl patent were the " mechanical equivalents of his bearings."

II.

EXCEPTIONS AS TO THE ADMISSION AND REJECTION OF EVIDENCE EMBODIED IN ASSIGNMENTS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

These exceptions are scarcely worthy of serious consideration, but, as they are contained in the record, we say a few words on the subject:

EXCEPTION 1. This relates to the introduction in evidence of a sewing machine, by the plaintiff below, as representing his invention. This was at the beginning of the case. He first offered in evidence his patent. Then followed in quick succession Exhibits B, C, D, E, and F, representing models both of the Cramer invention and of the prior art (Rec., 35-39). After these models had been put in evidence, Cramer, who was on the witness stand, was asked if he had a full-sized machine which represented his invention. He replied that he had, and thereupon produced a machine, marked "Plaintiff's Exhibit G."

Clearly there was no error in permitting this machine to be put in evidence. The learned counsel objects to it because it did not represent the Cramer invention; but that was a matter of fact for the jury to determine. Mr. Cramer testified that it did represent his invention, and his counsel offered it in evidence as such. Consequently, that was a question of fact for the jury to determine, and no error was committed by allowing them to determine it.

But there is another reason why this exception cannot now be considered, and that is because the exhibit in question is not properly before this court. It was not made a part of the bill of exceptions and it is no part of the bill of exceptions. It is not here for examination. Consequently, it cannot be considered by this court. The proper time and place for the consideration of this matter was on motion for new trial before the lower court.

EXCEPTION 2. The assignment of error founded on this exception reads as follows:

"The said circuit court erred in overruling the "objection of counsel for defendant to the following "question and in admitting the plaintiff's following "answer thereto.

"Q. Now, Mr. Cramer, regarding the prices at "which you sold your machines, did you get any ad-

" ditional price by reason of having your improve-
" ment on the machine over the old machine?
" A. I got $5 more. I charged $5 more."

This question was answered fully by the witness before any objection was made to the same, and no motion was ever made to strike it out. In other words, when the question was asked, no objection was interposed at all, and there being no objection, the witness answered it. Thereafter counsel for defendant said:

" I submit that this is not proper testimony, if
" your Honor please. I suppose he is getting at the
" question of damages now." (Rec., 44.)

Thereupon the court said, "The objection is overruled."

Counsel did not thereafter move to strike out the answer and instruct the jury to disregard it, but he merely took an exception to the refusal of the court to rule out a question which had already been answered by the witness and which was not formally objected to at the time it was asked. Such loose practice as this should not be tolerated, and certainly cannot form the basis for reversing the judgment.

But in any event the question was proper. Counsel for the defendant did not advance any reason why

the question was improper, which fact alone would be a sufficient answer to his objection, but the question was certainly proper as showing the utility of the Cramer invention and also as an element in fixing the damages.

EXCEPTION 3. This stands on the same footing as the exception just considered. The proceedings regarding the matter appear on page 48 of the record. It will be seen therefrom that after certain questions had been put to the witness and fully answered by him, counsel for the defendant asked permission "to have the last two or three questions and answers read." This was done, and he then said:

"I object to the statement of the witness where "he used the expression, or rather where Mr. Miller "in his question used the expression, 'which you "'thought interfered with your patent.'"

The court overruled this loosely framed and ridiculous objection, and the ruling is now assigned as error. No motion was made to strike out the answer, and it is a novel practice, after several questions have been asked and fully answered without objection and have gone to the jury, for opposing counsel to have them read over to him by the reporter and then to interpose an objection and take an exception to the action of the court in overruling the objection. We

understand the rule to be that a question must be objected to before it is answered—not afterwards.

But in any event, the evidence was entirely proper. It was used merely as matter of inducement, as will be clearly seen by reference to the record. It was not intended as an expression of an opinion. It merely shows that Cramer saw a cut of the Diehl sewing machine stand which he thought interfered with his patent, and thereupon he sent a formal written notice to that effect to the Singer Manufacturing Company. It was merely for the purpose of showing his reason for sending the notice to the company. The exception appears to us frivolous.

EXCEPTION 4. The assignment of error concerning this exception sets up that the court erred "in "overruling the objection of counsel for defendant "to the testimony of the witness Seeley as to what "might be equivalents of the knife-edge bearings of "the patent sued upon, and in permitting said wit-"ness to testify as follows:

"'A. Where there are a number of forms which "'we consider to be the equivalents of each other, "'and to operate in the same way, and where the in-"'ventor has a choice or right to select from among "'them, we describe the one which he prefers to use, "'for the reason that the Patent Office requires but

"'one operative form to be shown. Of course, we "'do not limit him to that form, but use it as illus- "'trating a number of different forms which he "'might choose if he so desired.'" (Rec., 435.)

We submit that no such objection or exception was taken. By reference to page 121 of the record, the answer above quoted will be found as having been given by the witness Seeley in answer to the following question:

"Q. Right there, what is the usual custom in "writing specifications of patents with regard to de- "scribing the forms of the mechanism? Do you at- "tempt to describe all the forms, or how is that?"

Then follows the answer above quoted. No objection was interposed to this question in any way, shape or form; but, on the contrary, the witness answered it without objection, and then proceeded to give considerable testimony thereafter of a kindred character. He was asked four more questions, none of which was objected to and all of which were answered. Then it appears, on page 122 of the record, that in the middle of another question which was being propounded by Cramer's counsel, and before it was completed, Mr. Wheaton interrupted and said:

"If your Honor please, I object now to testimony "tending to show what may be equivalents of the "knife-edge bearings described in the patent, upon "the ground that the patent particularly specifies "elements that cannot be taken out of it by construc- "tion and substituting others for them," etc., etc.,

Thereupon a long colloquy took place between Mr. Wheaton and the court, and at the end of that colloquy the court said:

"I will overrule the objection with the explana- "tion already given." (Rec., 124.)

To this ruling counsel for defendant took an exception, and that forms the basis of his specification of error No. 4, which we are now considering.

It is clear that there was no such exception as the one specified in assignment of error No. 4. The answer quoted in said assignment No. 4 was given without any objection being interposed. And to make the matter still worse, several subsequent question were asked of the witness and answered, on the same subject, without any objection, before the learned counsel awoke from his slumbers and interrupted opposing counsel in the middle of another question by interposing an objection.

EXCEPTION 5. The expert witness Brown was on

the stand, and he was shown the plaintiff's exhibit P, which represented the construction of the stand sold by the Singer Manufacturing Company. After stating that he fully understood the construction in question, he was asked the following:

"Q. State what effect that construction would "have in regard to overcoming these old defects "which you mention as being inherent in the old "style of mounting." (Rec., 162.)

This was objected to, though the ground of the objection is not very clear and we cannot ascertain what was passing through the counsel's mind. The ground interposed was that claim 1 covers a combination of elements. Why that should be a ground of objection to this particular question, we are unable to conceive. The fact that claim 1 was for a combination, and not for a single element, certainly did not make the question improper. In fact, we were not talking about claim 1 of the patent at all. The subject-matter of the investigation was the defendant's machine, represented by Exhibit P. We were trying to show that by the construction shown in that machine, all of the advantages claimed by Cramer as inherent in his machine had been appropriated by the defendant, and this we certainly had a right

to do. Cramer claimed that he had made an invention, and that by the same he had obviated certain old and well-known defects in the prior art. He produced this machine, Exhibit P, as an infringement upon his patent. In comparing the same with his patent, he called this expert witness, Brown, a man of twenty-seven years experience in the sewing machine business, who was describing the infringing machine to the jury, and, amongst other things, said that such construction obviated the old defects of the prior art, which it was the purpose of the Cramer patent to accomplish. We perceive no error in this. Indeed, we cannot understand the basis upon which the learned counsel claims it to be error. It seems too plain to us for argument.

EXCEPTION 6. The specification of error (Rec., 435) in this connection alleges that the circuit court erred in striking out the testimony of the witness, F. J. Kierce, and then the testimony alleged to have been struck out is copied into the record at page 435. The testimony so given is at page 334 of the record. By referring to page 335 of the record, it will be found that the court did not strike out the entire answer, but only a portion of it, and as the specification of error is directed to the striking out

of the whole answer, a fact which did not exist, the specification is bad. It is true that the court did first strike out the entire answer, as will be seen by reference to page 334; but it is equally true that upon further consideration of the matter, as will be seen by reference to page 335 of the record, the court modified its former ruling and struck out only a portion of the answer, denying the motion to strike out all that part of the answer where the witness testified to what Mr. Cramer said. It was only the remainder of the answer which was stricken out. Clearly, therefore, the specification of error is bad, because it is aimed at something which did not exist.

EXCEPTIONS 7 AND 8. These exceptions relate to the action of the court in excluding from evidence a fragmentary portion of the record in the old case of *Cramer* vs. *Fry*. The learned counsel did not make any argument on these two exceptions in the court of appeals; consequently, there is nothing for us to answer regarding them. They do not appear to us worthy of consideration, any way; but, on the contrary, they seem to be of the frivolous character which marks so many of the alleged exceptions in this case.

It is probable that these two assignments of error,

7 and 8, as well as the preceding one, assignment 6, were intended by the learned counsel as a basis for the contention that the judgment in the old case of *Cramer* vs. *Fry* acted as a bar to the present action. If so, the answer made to such contention by the court of appeals is so perfect and complete that nothing we might say on the subject could make it any stronger. Therefore, we adopt is as our argument. It reads as follows:

"It is contended that the court erred in excluding "certain evidence which was offered concerning the "alleged complicity of the Singer Company with a "prior action prosecuted by the defendant in error "against an agent of the company. That action had "been brought in the circuit court for the northern "district of California by the defendant in error "against the company and Willis B. Fry, its agent. "The Singer Company made a special appearance "for the purpose of challenging the jurisdiction on "the ground that it was a corporation of another "state, and could not, without its consent, be sued "within the jurisdiction of the northern district of "California. Upon that ground, it obtained an "order dismissing it from the action, without preju-"dice to the right of Cramer to bring a future action "against it for the same cause. The action was there-"after prosecuted against Fry alone, and a judgment "was rendered in his favor on the ground of non-"infringement. When the present suit was subse-"quently begun against the Singer Company, it

" pleaded the judgment which was rendered for the " defendant in the action against Fry as *'res adjudi-* " *cata,'* contending that it could avail itself of that " judgment for the reason that it had employed coun- " sel to defend the action against Fry, and had de- " frayed the expenses of his defense. That plea was " sustained in the circuit court, but upon writ of " error from this court, the judgment was reversed " upon the ground that the evidence failed to show " that the connection of the Singer Company with " the defense of the action against Fry was open and " known to the opposite party. (*Cramer* vs. *Singer* " *Mfg. Co.*, 93 Fed., 636.) The case was thereupon " remanded for a new trial. Upon the new trial, " which resulted in the judgment which is now " sought to be reviewed, the plaintiff in error intro- " duced certain testimony which, according to its " contention, tended to show knowledge upon the " part of the defendant in error or his counsel of the " fact that the plaintiff in error had defrayed the " expenses of the litigation upon the part of the de- " fendant Fry. One of the attorneys for Fry testified " that, pending the litigation of that cause, one of the " attorneys for Cramer remarked to him that he did " not expect to make anything out of Fry, for the " reason that the latter was the Singer Manufactur- " ing Company's agent, but that he expected to re- " cover a judgment in that action before the jury, and " that he would make that judgment the basis of pro- " ceedings for the purpose of getting an injunction " against the Singer Company, and that he also re- " marked that counsel for Fry ought to be well paid

" by the Singer Company for the services which they
" were rendering in that action in defending it, and
" that Cramer was present and also remarked that
" they ought to be well paid by the Singer Company
" for their services. Upon motion of the defendant in
" error, all of this testimony was struck out except
" that concerning the remark made by Cramer him-
" self. Evidence was also offered from the record of
" testimony in the case of *Cramer* vs. *Fry,* in which
" it appeared that counsel for Cramer had offered in
" evidence a page from one of the pamphlets of the
" Singer Company, describing the advantages of the
" machine which the company was selling, and al-
" leged that it set forth advantages that 'the company'
" was claiming for that particular form of treadle.
" The plaintiff in error also offered in evidence the
" letter from the defendant in error to the Singer
" Manufacturing Company, of date February 8,
" 1883, directing the company's attention to the ad-
" vantages of his patent. This was offered upon the
" theory that because it was introduced in evidence
" in the case of *Cramer* vs. *Fry* it must be inferred
" that Cramer's counsel knew that that case was being
" defended by the Singer Manufacturing Company.
" We find no error in the exclusion of any of this tes-
" timony. None of it tended in the remotest degree
" to prove knowledge on the part of counsel for the
" defendant in error of the fact that the Singer Com-
" pany was in any way connected with the defense of
" the case against Fry. There was no evidence to
" prove that any fact was ever communicated to the
" defendant in error or his counsel, or that anything
" came to their notice from which such knowledge

"might be imputed. If, indeed, counsel for the de-
"fendant in error supposed that the plaintiff in error
"intended to pay for the services of Fry's attorneys,
"it was, so far as the record informs us, the merest
"conjecture on their part. The suggestion that the
"company ought to pay for those services is wholly
"consistent with an entire absence of knowledge
"upon that subject. To the suggestion so made, so
"far as the evidence shows, there was no response;
"no information was offered. The fact that counsel
"for Cramer intended to use their judgment, in case
"they obtained one, as the basis of an injunction
"against the company, indicates, if anything, that
"they believed the company would not be liable as
"a judgment debtor upon such judgment. The open
"dismissal of the Singer Company from that suit,
"upon its own motion, was significant of its with-
"drawal from the litigation and of its purpose not to
"be bound by the judgment to be rendered therein.
"Why should that company have taken the pains to
"assert its right to be dismissed as a party defendant
"to that action if it did not intend thereby to place
"itself in a position where it could not be affected by
"the judgment? Its dismissal from the action was
"wholly inconsistent with an intention to be identi-
"fied with Fry as a defendant to be bound by the
"judgment. The judgment entry dismissing it ex-
"pressly reserved the right of the plaintiff in that
"action to again sue the corporation upon the same
"cause of action. Both the dismissal and the reserva-
"tion of that right were empty and idle acts of the
"corporation intended to maintain such connection
"with the action as to be concluded by a judgment

" therein. As against the overt declaration of its atti-
" tude to that litigation, the evidence of its continued
" connection with the defense must needs be definite
" and certain, and must not rest in suspicion or con-
" jecture. The evidence which was offered, and
" which was excluded by the court, did not tend to
" sustain the conclusion that Cramer or his counsel
" had knowledge that the Singer Company was, after
" its withdrawal from the action, identified with the
" defense."

EXCEPTION 9. This relates to the refusal of the trial court to allow the defendant below to put in evidence the opinion of Judge McKenna from the old case of *Cramer* vs. *Fry*. Clearly, there was no error in this, and it would have been a gross violation of a well-settled rule of law if the court had allowed that opinion to go in evidence and to be read to the jury. Under such circumstances, the opinion of the court is entirely incompetent for any purpose whatever.

Dickerson vs. *Planters' Bank*, 16 Wall., 250.
Stone vs. *U. S.*, 164 U. S., 382-3.
British Q. M. Co. vs. *Baker*, 139 U. S., 222.
Lehnen vs. *Dickson*, 148 U. S., 71.
Saltonstall vs. *Birtwell*, 150 U. S., 417.

EXCEPTION 10. This exception relates to the action of the court in sustaining an objection to the fol-

lowing question asked of the witness Angel, viz:
"Q. I want to ask you whether you can find in the
"Cramer patent any of the changes which you found
"existing between the defendant's old trade-mark
"stand and the defendant's present Diehl stand?"
(Rec., 366.)

This question was purely argumentative, and did not call for a question of fact. The witness had already described the Singer Company's trade-mark stand and its Diehl stand, and those matters were before the jury as questions of fact. What the counsel means by asking if the *changes between those two stands* were found in the Cramer patent is somewhat difficult to understand. It appears to be one of those technical and nebulous theories for which the counsel is so famous. The question at issue was not whether the changes between the Singer Company's trade-mark and Diehl stands were found in the Cramer patent, but the question was whether the Diehl stand was an infringement of the Cramer patent. and the proper way to determine that was to compare the two together under appropriate instructions from the court as to the scope of the Cramer patent. This awkward, roundabout, and cumbersome way to reach it by asking whether the changes between the

trade-mark and Diehl stands were found in the Cramer patent was improper, because it was argumentative and otherwise incompetent, calling for an opinion and legal conclusion, not for a fact.

But further, the question was improper from another point of view, and that is this: It is a well-settled rule of law that it is improper for expert witnesses to compare the defendant's infringing machine with those of the prior art. It is proper to compare the plaintiff's patented machine with devices of the prior art; but it is not proper to so compare the defendant's infringing machine.

III.

Refusal of the Court to Instruct the Jury that a Witness False in One Part of His Testimony is to be Distrusted in Others, Embodied in Assignment 13.

Plaintiff in error requested the court to instruct the jury that a witness false in one part of his testimony is to be distrusted in others. This is assignment of error No. 13. (Rec., 437.) The instruction as requested was taken bodily from the code of civil procedure of the state of California . (Section 2061.) Passing for the moment the question whether provi-

sions of the code of California are of binding force and obligation upon the federal courts, we concede, for the sake of argument, that the maxim, "*falsus in uno falsus in omnibus,*" is in force under the common law, and that the section cited in the requested instruction is substantially equivalent to the maxim quoted. Both the maxim and the section cited, however, have their established construction and their appropriate limitations.

In *People* vs. *Strong* (30 Cal., 155), decided in April, 1866, an instruction was requested in a prosecution for murder substantially similar to that in the case at bar. It was refused, and an exception was reserved. On appeal, the supreme court of California held that the instruction did not present a correct principle of law; that the rule of credibility did not apply to mistakes which were the result of error, inaccuracy, and embarrassment, without any real intention to misrepresent or deceive. In other words, the false testimony which would justify a jury in rejecting distrusting the testimony of a witness must be *willfully false* and upon a *material matter.*

The code of civil procedure went into effect on the first Monday in January, 1873, nearly seven years after the decision in *People* vs. *Strong*. Conceding

that section 2061 is a substantial expression of the maxim, it is only necessary to say that every case in which the section has been construed by the supreme court of California, since that time, has approved and followed *People* vs. *Strong* in direct terms.

People vs. *Plyler,* 121 Cal., 163.
People vs. *Sprague,* 53 Cal., 494.
People vs. *Soto,* 59 Cal., 368.
People vs. *Flynn,* 73 Cal., 511.
People vs. *Righetti,* 66 Cal., 184.
People vs. *Clark,* 84 Cal., 573.

The instruction requested by the learned counsel in the case at bar omits two important and essential elements and qualifications of the rule, viz: that the testimony must be *willfully false,* and that it must be on a *material matter.* Under the construction as requested, the jury would have been justified in disregarding the entire testimony of a witness on account of a single unintentional error or inaccuracy on a trivial or collateral subject. This is not and never was the law.

Again, we contend that the giving of such an instruction must be to a large extent a matter of discretion with the trial judge. He must, in the first place, decide whether there is anything in the testi-

mony of a witness or class of witnesses which would make such an instruction necessary or proper. He may have been of the opinion that an alleged contradiction in different parts of the testimony of the same witness, or in the evidence of the same witness given at different times, was more apparent than real. He may have considered, in the case of conflicting testimony of witnesses on opposite sides on the same point, that the case had to be laid before the jury without any expression of opinion on his part calculated to damage either witness. The cases are rare in all the reports in which the giving of a similar instruction has been justified. There are many in which the refusal of such an instruction has been approved.

There was nothing in the testimony of the witness Cramer in the case at bar which made such a charge either necessary or proper. The gist of the argument of counsel for plaintiff in error is, that upon the trial of the former action, *Cramer* vs. *Fry,* in 1895, Cramer did not carry his invention back of 1882. There is no contradiction, apparent or real, between his testimony in that case and this. No charge of a contradiction can be predicated upon an omission to testify on a former occasion. The witness was not the judge

of what questions should be asked or answered on the former trial. He was in the hands of his former counsel, whose views of the issues in the case, and the evidence necessary to maintain them, may have differed from those of his present counsel in the case at bar.

The contention that Cramer should be discredited is based upon the allegation that he testified differently in a different case, that is, in the case of *Cramer* vs. *Fry*.. We have already shown that the alleged contradiction is unfounded; that there can be no contradiction between what a witness has failed or omitted to assert in a former trial and that which he did assert in the pending cause. But, even if a contradiction did exist, it furnishes no just ground or basis for the giving of the instruction refused. Such instruction can only be given upon the assumption by the court that the former testimony was true and the latter false; but this assumption cannot be made by the court. The question must go to the jury without any indication, express or implied, of the court's opinion on the point.

The case of *Carroll* vs. *Sprague* (59 Cal., 655) is conclusive on this point.

The second ground of attack upon the testimony of the witness Carmer is based upon his statement

that he was driven out of business by the Diehl machine in 1885, whereas it is asserted by counsel for plaintiff in error that the Diehl machines were not sent into Tuolumne county until 1886. From this the learned counsel argues that Cramer's testimony in this respect was false, which furnishes the foundation for disbelieving him in others. But the conclusion does not follow by any means. The Diehl patent was applied for on May 29, 1884, and was issued on October 14, 1884. (Rec., 85.) It is generally the custom to put a new machine upon the market either at the time of applying for the patent or prior thereto. The usual course is first to test it and ascertain its merits, and then apply for a patent. Indeed, the law allows two years use before it is necessary to apply for a patent. It is highly probable, therefore, that the Singer Manufacturing Company put these Diehl machines on the market prior to May 29, 1884 (the date of the application), or, at least, prior to October 14, 1884 (the date of the patent).

Furthermore, opposite page 52 of the record will be found the catalogue of the Singer Manufacturing Company for 1885, and on pages 3 and 24 of said catalogue will be found cuts of the Diehl machine. The reading matter of the catalogue shows unmistakably

that at that time the Diehl machines had been put into very extensive use.

But further, if it should be a fact that the Diehl machines did not actually reach Tuolumne county until 1886, that would not be a denial of Cramer's testimony. It is entirely within the bounds of reason that the Singer Company, by its extensive advertisements and catalogues distributed in Tuolumne county in 1885, showing the merits of the Diehl machine, could have taken orders for the same, and thereby run Cramer out of business, although the machines themselves might not have been delivered until 1886. That the Singer Company was advertising its Diehl machines in 1885 is proven by their catalogue at page 52 of the record. Therefore, the alleged fact that the machines did not actually reach Tuolumne county until 1886 becomes immaterial, and under such circumstances the maxim does not apply.

IV.

EXCEPTIONS ON THE SUBJECT OF THE DIEHL PATENT AS EVIDENCE, EMBODIED IN ASSIGNMENTS OF ERROR NOS. 36, 37, 40, 41, 42 AND 64.

AS TO EXCEPTION 36: It merely states that the defendant's machines were made under the Diehl patent, and the court gave the equivalent of that instruc-

tion, as will be seen by reference to the general charge found at page 424 of the record, where it is said:

"The defendant's device is made under and in "accordance with letters patent of the United States, "issued to the Singer Manufacturing Company as "assignee of Philip Diehl, which patent is subse- "quent to the date of the Cramer patent, the Cramer "patent being dated January 30, 1883, and the Diehl "patent of October 14, 1884."

Under these circumstances it is a little singular that the counsel should have the hardihood to allege error.

EXCEPTION 37. This relates to the refusal of the court to give the following instruction requested on the part of defendant in the court below, viz.:

"The jury are instructed that the defendant's pat- "ent is *prima facie* evidence that the alleged inven- "tions which are covered by its claims were new and "useful when they were made by said Philip Diehl, "the plaintiff's assignor, and in this respect the de- "fendant's patent is *prima facie* evidence for the de- "fendant to the same extent as the plaintiff's patent is "*prima facie* evidence for the plaintiff."

While the proposition of law announced in this request may be correct as an abstract proposition of law, it has no application to the facts in hand. The *prima facie* presumption in every patent relates to *the*

claims of the patent, and, therefore, the issuance of the Diehl patent is *prima facie* evidence that the inventions *covered by its claims* were new and useful. Otherwise he could not have procured a patent. But we are not concerned in this case about the claims of the Diehl patent. What we are concerned about is the construction of the *Diehl machine* in regard to its being an infringement upon Cramer's claims. The most casual reading thereof shows what his claims mean. Now, inasmuch as these claims were not in issue in the case at bar, and were not even a material or relevant fact, it was not error for the court to refuse to give the instruction in question, which was intended merely to say that *those claims* of the Diehl patent were *prima facie* new and useful.

All that was necessary to be said concerning the effect of the Diehl patent was said by the court in the general charge. After telling the jury that the defendant's machines were made under and according to the Diehl patent, the learned judge proceeded as follows:

"The mere fact, however, that the Diehl patent "was issued to the Singer Manufacturing Company "is not conclusive evidence that the device therein "shown is not an infringement of the Cramer patent. "It may be merely an improvement. That is a ques-

" tion of fact for you to determine, and if you deter-
" mine that the Diehl structure is in some respects an
" improvement, but in others an infringement of Cra-
" mer's patent, the fact that the patent was issued to
" the defendant for the Diehl structure subsequent
" to Cramer's patent will afford no protection to the
" defendant against the charge of infringement. It
" very frequently happens that, after a patent is
" issued to one person, another person may subse-
" quently secure a patent as an improvement upon the
" first; but such subsequent patent affords no protec-
" tion to the holder thereof against the charge of in-
" fringement of the first patent if, as a matter of fact,
" there be infringement. To determine whether a
" subsequent patent is an infringement of the prior
" patent, or of a claim of the prior patent, it is neces-
" sary to compare the device or combination of the
" later patent with that of the prior patent or claim,
" and ascertain whether any element of the prior pat-
" ent or claim has been appropriated or adopted in
" the subsequent patent. To aid you in such an in-
" quiry I will read to you the five claims of the Diehl
" patent."

This extract from the charge embraces a correct exposition of the law on the subject in hand, and furnishes all that was necessary for the jury. The question was whether the structure illustrated and described in the drawings and specification of the Diehl patent was an infringement of the Cramer patent, and not whether the improvements added to the

machine by Mr. Diehl, and for which he got his claims, were new and useful. Those improvements consisted in mounting both the band wheel and the treadle in the vertical brace, and if it be conceded that this was an invention, that fact would not authorize the company to infringe Cramer's patent. In mounting both the band wheel and treadle in the brace Diehl necessarily used the Cramer idea of mounting the treadle in the brace, and it can be no excuse for that piracy to say that he has also mounted the band wheel in the brace in conjunction with the treadle.

EXCEPTION 40. The same remarks apply to this as to the exception last considered, but in an aggravated degree. By this request the court was asked to tell the jury that it was a very important question for them to consider whether the defendant's machines were covered *by the claims of the Diehl patent*, and the request then proceeded to give reasons therefor. We have already shown that this was not an important question, and, in fact, was an immaterial one. The fact that the machines in question were covered by the claims of the Diehl patent was not inconsistent with the theory of infringement upon the Cramer patent. Consequently, the jury could not have been

aided in any degree whatever by being told that the defendant's machines were covered by the claims of the Diehl patent. Furthermore, the proposed instruction is improper in form, because it is argumentative. It is more in the nature of a partisan and highly colored argument to a jury than of a dispassionate statement of the law by a disinterested judge. Its phraseology is such that it would have been highly improper to give it in that form.

EXCEPTION 41. This is on the same footing as the exception last considered. It refers to the "several claims" of the Diehl patent, a matter about which the jury had absolutely nothing to do.

EXCEPTION 42. This is on a line with what has already been said. The proposed instruction is nothing more than an argument on behalf of the plaintiff in error, and for that reason it would have been highly improper to go to the jury from the court. It also contains the same vice as the preceding exception. For instance, it says: "The said Diehl patent, "being later in date than the plaintiff's patent, it "is evidence which tends to prove that the inventions "covered by it were made after the plaintiff, Cramer, "had completed the inventions which are described "in or covered by his patent," Now, the "inventions

covered " by the Diehl patent are those covered by his *claims,* and those claims are nothing more than claims for certain improvements in sewing machine stands not affecting the invention covered by Cramer's claim. Of course, those Diehl inventions were made subsequent to Cramer's patent; but they have nothing to do with the controversy here, being mere improvements, which were possibly original with Diehl, but which, after all, were nothing more than improvements upon the Cramer invention. Cramer mounted his treadle in the vertical brace. That constituted his invention. Diehl came after him and mounted his treadle in the brace, and in addition thereto also mounted his band-wheel in the brace. If Cramer's claim for mounting the treadle in the brace is valid, Diehl does not avoid infringement by adding to that feature the additional one of mounting his band-wheel in the brace, so that both the treadle and the band-wheel are mounted in the brace. In other words, Diehl cannot, by adding to or improving upon Cramer's invention, appropriate to himself and use the Cramer invention. If a thief steals my horse, he gets no title to the animal merely because he uses his own saddle and bridle while riding him.

EXCEPTION 64. This exception is aimed at that portion of the court's charge which was given upon the subject of the Diehl patent. We submit that the language used by the court was proper and constituted a correct exposition of the law on the subject. It is found at pages 424 and 425 of the record. In substance it tells the jury that the defendant's machines are made under a subsequent patent, but that such fact is not conclusive evidence of non-infringement; and in order to determine the question of infringement, the jury must compare the two structures, and if they find that the Diehl structure is in some respects an improvement, but in others an infringement on Cramer's patent, then the fact that a patent was issued to Diehl does not protect him. This is a true exposition of the law, and being such, it was all that was necessary to go to the jury.

V.

EXCEPTIONS RELATING TO DAMAGES EMBODIED IN ASSIGNMENTS OF ERROR NOS. 24, 25, 66, 67 AND 68.

EXCEPTION 24. This exception is without merit, because the substance thereof was given by the court.

The instruction as requested by the counsel reads as follows:

"It is admitted by the plaintiff that there has not "been any infringement by the defendant of the sec- "ond claim of the patent. Damages are now claimed "for an alleged infringement of the first claim of the "patent only. The jury, therefore, should not pay "any attention to the second claim of the patent, but "should decide the case just as though that claim "were not in the patent at all."

By reference to page 418 of the record it will be found that the court instructed the jury as follows:

"The patent in this case contains two claims. It is "not charged that there has been any infringement "of the second claim of the patent, and the present "suit is to obtain damages for the alleged infringe- "ment of the first claim only."

In substance this is not different from the instruction requested by the counsel for the plaintiff in error. Hence Exception 24 is without merit.

EXCEPTION 25. This request for an instruction reads as follows:

"The defendant has not introduced any evidence "tending to prove any damages that have resulted to "him from any infringement of said first claim "alone. If, therefore, you should find that said first "claim had been infringed by the defendant, the

"damages assessed should be nominal; that is, one "dollar or more."

This requested instruction assumes that there was an entire absence of evidence on the matter referred to therein, and, of course, if there was any evidence whatever on the subject proper to go to the jury, it was no error to refuse the instruction, because that was a matter of fact for the jury to determine. The generic propositon included in this instruction has already been discussed by us in that portion of the brief relating to the request for instruction to the jury to find for defendant on the ground of no infringement, and it will not be necessary for us to say anything further thereon. The narrow or specific view covered by the requested instruction demands a few additional words.

The theory of the learned counsel seems to be that the evidence of damages adduced by the plaintiff related to both claims of the patent, and that there was no evidence whatever offered for the purpose of apportioning those damages between the two claims. Consequently, he argues that there could be no verdict for damages other than a nominal amount.

This doctrine is known in patent law as "segregation of damages," and is of an exceedingly technical

character. While theoretically founded on right and justice, its application is so difficult, that in nearly all the cases where it has been applied, it has resulted in wrong and injustice.

Briefly stated, it is to the effect that where a patent contains a plurality of claims and only a portion of those claims have been infringed, the damages awarded must be such as are attributable to the infringed claims only, and not to the whole machine, and the burden of proof is on the plaintiff to apportion those damages with a view to showing what part thereof is attributable to the infringed claims. The hardship of this rule lies in the practical difficulty of applying it. A patentee may have suffered the heaviest damages by infringement of some of the claims of his patent, and yet he may be unable to segregate those damages by legal proof so as to find out the exact proportion thereof attributable to the infringed claims. In such case there would undoubtedly be a failure of justice, and a strict application of the rule would result in wrong and injustice. To meet such emergency, modifications to the rule have been made, which will be noted later on. We now formulate our answer to the contention advanced by our adversaries regarding this proposed instruction:

1. *In the first place, as a matter of fact the evidence given on the subject of damages related to claim 1 only, and did not include claim 2. In other words, there was a segregation of damages.*

The plaintiff's theory of damages was that of *lost sales.* He granted no licenses, and consequently, there was no established license fee to be used as a measure of damages. The mode he elected for the enjoyment of his patent was to keep a close monopoly thereof to himself by manufacturing and selling the patented device and enjoying the profits thereof. He was engaged in the business of selling sewing machines, and by reason of this patented feature he was enabled to obtain an increased profit over the machines which he sold. In that way he built up a remunerative business. The defendant, by putting the infringing machine on the market in competition with the plaintiff, and by selling at a lower price, was enabled to, and did, ruin and destroy the business of the plaintiff and compel him to retire therefrom. Solely by reason of the infringement, therefore, the defendant was enabled to sell a large number of its machines containing the patented feature of claim 1. The plaintiff was able and willing to supply this demand, and would have supplied it if the infringement had not intervened.

Under such circumstances, the proper measure of damages is the amount of profits which the plaintiff would have made if he had sold of his own machines the same number which the defendant sold of its machines, the theory being that but for the infringement plaintiff would have sold the same number of machines. This was the plaintiff's theory of damages in the lower court, and it is a correct one. Much evidence was given on the subject and on all the elements of the proposition necessary to make out a case. This evidence was submitted to the jury and they passed upon the same. The evidence so adduced was directed specially to claim 1 of the patent, and was purposely framed to exclude claim 2.

The essence of claim 2 consists of a cushion F, and the block f, referred to in the testimony as "mufflers," and used for the purpose of rendering the machine noiseless. These devices have no relation to the fundamental invention of mounting the treadle in the brace. In other words, the broad fundamental invention of mounting the treadle in the brace is covered by claim 1, and the subsidiary feature of the mufflers is covered by claim 2. Now in the machines sold by Cramer he discarded the mufflers of claim 2, and used only the invention of claim 1. Those ma-

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chines were represented by the plaintiff's Exhibit G, and in those machines the cushion and block of claim 2 were not used. When this model was offered in evidence it was objected to on the ground that it did not represent the Cramer patent (Rec., 41), and the reason advanced in argument for that contention was the assertion that said exhibit did not contain the said cushion and block. See brief of Wheaton & Kalloch, pages 135-6-7, in the court of appeals.

At page 135 of that brief it is said: "The plaintiff "offered the machine, Exhibit G, in evidence as a "full-sized machine that represented the invention "of the plaintiff. The exhibit differs from the pat- "ent, in that it does not have the long vertical loops "through the brace, which the patent says are to per- "mit the entrance of the treadle. Neither does Ex- "hibit G have the cushion F or block f that are "called for by the second claim of the patent."

And also at page 137 of said brief, referring to Exhibit G, it is said: "It was the kind of stand that Cramer made and sold. He testified that he made a "profit of three and a half dollars on each of them "that he sold."

Also, at page 41 of said brief, it is said: "While "at first glance the fact that Mr. Cramer made the "treadles which he sold without any cushion F or "block f," etc., etc. * * * We believe there is

no proof that Mr. Cramer could ever have sold a single one of his treadles if he had made them with the cushion F and block f, as called for by his patent."

It is not only clear from the record, but the fact was conceded in the lower court, that in the machines which Mr. Cramer actually sold the cushion and block of claim 2 were not used. In other words, Cramer embodied the invention of claim 1 only in the machines which he sold, and did not use the invention of claim 2. Consequently, there was no occasion for the segregation of damages, because the damages flowed from infringement of claim 1 only, it being conceded that the defendant had not used claim 2 and that in the machines which Cramer sold neither did he use claim 2. The matter stands, therefore, just as though there was only claim 1 in the patent, and no other claim at all, and the law cited regarding the segregation of damages as between claims has no relevancy. Of course we understand the rule that where only one of several claims is infringed the damages must be segregated, but if there is only one claim in a patent, then there is no case for segregation, and if there be several claims in a patent, but only one of them is infringed, and if the patentee himself used only that one claim

in actual practice and the evidence of damages adduced related only to that one claim, then the matter stands on precisely the same footing as though there was only one claim in the patent. Such was the case at bar. The court of appeals in its opinion said:

"There was testimony to the effect that the de-
"fendant in error in the years 1881-2-3-4 sold sew-
"ing machines *containing claim 1* of his patent and
"that the cost of putting *the same* into each machine
"was $1.50, and that his net profit on each machine
"sold *containing claim 1* was $3.50, and that when
"the plaintiff in error put upon the market a machine
"which contained the infringing device, and sold
"the same at a lower price than that at which the
"defendant in error had sold, the business of the
"latter was inqured, and he was compelled to with-
"draw from the field."

We take this to be a finding in effect that Cramer used only claim 1 in the machines which he sold.

2. *In the next place, this proposed instruction was improper, because the entire value of the Cramer machine as a maketable article was properly and legally attributable to the patented feature of claim* 1, *and the feature embodied in claim* 2 *added nothing whatever to the value of the machine as a marketable article.*

This rule of law is a limitation on the general rule heretofore adverted to and is found in the leading case of *Garrettson* vs. *Clark*, 111 U. S., 121. It was formulated by Judge Blatchford on the trial of that case in the lower court, and the rule as announced by him was adopted by this court on appeal in a decision rendered by the late Mr. Justice Field, where it was said:

"The patentee must in every case give evidence "tending to separate or apportion the defendant's "profits and the patentee's damages between the "patented features and the unpatented features, and "such evidence must be reliable and tangible, and "not conjectural or speculative; *or he must show, "by equally reliable and satisfactory evidence, that "the profits and damages are to be calculated on the "whole machine, for the reason that the entire value "of the whole machine as a marketable article, is "properly and legally attributable to the patented "features.*"

Other cases where the rule has been applied by this court are:

Crosby Valve Co. vs. *Safety Valve Co.*, 141 U. S., 454.

Hurlbut vs. *Schillinger*, 130 U. S., 471.

Callaghan vs. *Myers*, 128 U. S., 665.

Root vs. *Railway Co.*, 105 U. S., 203.
Elizabeth vs. *Pavement Co.*, 97 U. S., 139.

Now apply the rule to the facts in hand. In the first place it must be conceded that the invention of claim 1 is fundamental in character and is the feature which gives to the Cramer machine its value. The invention of claim 2 is merely subsidiary to the fundamental invention of claim 1.

In the second place the evidence shows that in actual practice Cramer did not use the invention of claim 2 in the machines which he sold, as we have already pointed out herein, and as was openly conceded in both the oral and printed arguments of counsel for the Singer Company in the lower court.

It also appears from the evidence, without any pretense of dispute, that by reason of the use of the invention of claim 1 Cramer was enabled to sell his machines for five dollars more apiece than any machine not containing the invention. The cost of inserting this additional invention into the machine was $1.50 each, thus leaving a net profit of $3.50 on each machine, due solely and entirely to the presence therein of the invention of claim 1.

And finally the testimony shows, without dispute, or any attempt at dispute, that the invention of claim

2 did not contribute in any way to the marketable value of the machine. At page 60 of the record we find the following testimony given by Cramer:

"Q. Mr. Cramer, something is said in your pat-
"ent with regard to a cushion marked F, and a
"block *f*. Just state what is the object of that de-
"vice in the construction.

"A. The loop holes have to be large in the base,
"in order to admit of the treadle being moved in,
"and this block and cushion, as it is called, is put up
"on the top to fill up this hole so that you cannot
"raise up the treadle. That is, if one wants to pur-
"posely raise up the treadle, they could do it so much
"better without that block in there. That is all the
"block is in there for.

"Q. Suppose no block was in there at all: could
"you run the machine just as well?

"A. *Just as well. It is not essential to the run-*
"ning of the machine at all.

"Q. Would the parts be in alignment?

"A. Yes, sir.

"Q. And you say the object of the block was to
"prevent any one lifting it out by hand.

"A. Yes, sir.

"Q. The piece of leather is also said to be fitted
"into the groove on the upper side of the trunnions:
"what is the object of that piece of leather?

"A. That makes it still softer, and it would make
'less noise if there was a piece of leather there than
"it would just with a piece of wood. It is kind of
"an extra thing.

"Q. And that you thought would be some sort "of an additional improvement if you added it.

"A. It makes it a little softer.

"Q. You mean for the operation of the trun- "nions?

"A. Yes, sir.

"Q. *But you say that is not essential to the mech- "anism or the operation of the machine.*

"A. *No, sir; it is not.*"

At page 72 of the record we find the following testimony from Cramer on cross-examination:

"Q. Have you read your patent so as to know?

"A. Yes, sir; I have read it time and time again. "But I do not understand, and never did understand, "that this block was essential to the working of the "machine. It is not essential to the working of the "machine in the least."

At page 105 of the record we find the following testimony from Cramer on cross-examination:

"Q. The idea here, is it not, is that if you "left out the leather F, or some other soft material in "place of it, over the top end of the trunnion, that "then the treadle would be permitted to bounce and "thump endwise, and so forth?

"A. No, sir; unless you caused it to do so.

"Q. Did you ever use one of your knife-edged "trunnion treadles without putting in the cushion "and block?

"A. Yes, sir.

"'Q. Did you do it before you took out your pat-
" ent or applied for it?
" A. Yes, sir.
" Q. *Did you find it work just as well without*
" *that cushion as with it?*
" A. *Just as well.*"

And on page 106 we find the following testimony from Cramer:

" Q. Was the use of that cushion and block any
" improvement or not?
" A. No improvement in its motion whatever.
" It is just for the purpose as I stated there.
" Q. What is the improvement that is created by
" the use of the cushion and block?
" A. If you have no cushion and block in there,
" you take out the machine like that (illustrating),
" the treadle would be to one side like that; or if any
" one wants to go and shake it like that (illustrating).
" Q. They never do that while using the machine
" as a sewing machine?
" A. No, sir; but I have seen you do it here
" once."

On page 109 we find the following testimony from Cramer on cross-examination:

" Q. Now, Mr. Cramer, to cut it short, when you
" take out this large block and leave that long open-
" ing shown in figure 2 of your patent and described
" in the specification, what is there to keep the bear-
" ing of the treadle in place or in alignment?

"A. The natural gravity of the treadle and your "foot being on the top to work it. That is all."

And on page 113 of the record we find the following testimony from Cramer on cross-examination:

"Q. Then the defect which your cushion and "block was to cure was merely a defect that was cre- "ated in your machine and which did not exist in "other machines?

"A. I do not see any defect there. It is an auxil- "liary adjunct to to the treadle, to the peculiar shape "of that machine; *not a necessary element to the "machine at all.*"

The witness Herman Cramer, Jr., gave testimony to the same effect, on page 176, as follows:

"Q. In your father's construction there is a "wooden block and leather cushion put in the brace over the bearing. Did you ever operate the machines "without that?

"A. Yes, sir.

"Q. How did they operate?

"A. *Just as well. They are not needed in there "so far as I can see, as regards the operation of the "treadle.* * * *

"Q. You found out they could be operated suc- "cessfully without the block?

"A. *Unquestionably.*"

The plaintiff's expert witness, A. C. Brown, gave

similar testimony on pages 172-3 of the record, as will be seen by the following excerpts therefrom:

"But the thing that I see about that, as far as the "bearing is concerned and as far as the whole con- "struction is concerned, is that the treadle is hung in "the brace. That is where I contended all along, and "always have contended, is the great advantage. As "to the different bearings that are used, it does not "make much difference about that. * * * With "that cushion that you speak of, brought away from "there it does not necessarily follow that the treadle "is going to get out of place. * * * *The only "merit I saw in the whole thing,* as far as my look- "ing at it is concerned, *is the treadle being hung in "the brace.* I care nothing about the bearings. Of "course I care about the treadle being hung in the "brace. I think that is a fine thing. It has obvi- "ated a great many of the objections that there were "to treadle construction before. * * * *I think "it would work very well with that block and cush- "ion left out,* if the machine was sitting still in regu- "lar working order. The bearing is right there, it "works right along, and there is nothing to move it "around, unless you pick up the machine, and in "moving it it falls out, and then I think it would fall "back into its place again. * * * *I say it would "work first rate without the cushion and without the "block."

It also appears from the testimony, without any dispute, that Cramer was enabled to get five dollars

more for each machine containing his invention than he could without it. This is proven by the testimony of Herman Cramer (Rec., 41, 44), Herman Cramer, Jr., (Rec., 177), Mrs. Abbott (Rec., 155).

Not the slightest attempt was made to contradict these witnesses, and their testimony stands unimpeached and unchallenged as admitted facts in the case. In view thereof we submit "that the entire "value of the whole machine as a marketable article "is properly and legally attributable to the patented "feature" of claim 1, thus placing the case within the rule of law announced by this court in *Garrettson* vs. *Clark*.

An instructive case on this subject is *Asmus* vs. *Freeman*, 34 Fed. Rep., 902, where it is said:

"We find no substance in the objection that the de- "vice covered by claim 7 was not used by respondent. "The claim infringed (the first) covered the entire "invention. The seventh is structural merely, cover- "ing a method of constructing the 'slag discharge "piece' so as to regulate the cooling process em- "braced in the first. The master did not pass on this "question. We may infer, however, from what is "said, that he considered it immaterial. The gener- "al rule is that, where less than the whole number "of claims has been infringed, evidence must be ad- "duced to show the value of the part taken. This "is inapplicable, however, where, as here, the claim

" infringed embraces the whole invention, and the " others are simply structural. (*Wescott* vs. *Rude,* " 19 Fed. Rep., 830; *Thread Co.* vs. *Thread Co.,* 27 " Fed. Rep., 865; *Tondeur* vs. *Stewart,* 28 Fed. " Rep., 561.) The respondent admits that the sev- " eral claims between the first and seventh are of this " character. We think it reasonably plain that the " seventh also is. Furthermore, the proofs show that " the license fee paid was the value placed on the use " of the invention, irrespective of the device covered " by the seventh claim. While it is not shown that " this device was ever used, it is shown that generally " it was not. It seems to have been regarded as value- " less, and for this reason was not used by the respon- " dent. The master reports that ' it was admitted by " 'their counsel in argument before the master that " 'the respondents did not regard the method of claim " '7 as being of any practical value, and that had they " 'so regarded it they would have adopted it and prac- " 'ticed it.' This view respecting the value of the " seventh claim is of itself conclusive. It is said the " master is mistaken regarding the imputed admis- " sion. However this may be, he virtually reports the " matter covered by the claim as valueless; and the " proofs seem to justify this conclusion."

But outside of all direct testimony on the subject, this court can for itself see that the value of the Cramer machine must be due solely and entirely to the fundamental invention of mounting the treadle in the brace covered by claim 1, and that the mufflers

of claim 2 constitute an insignificant feature of the machine of no particular value. The relative value of the two claims is too apparent to admit of discussion, for it is a palpable and self-evident fact that the great value of the machine as a whole is due to the feature covered by claim 1. In such case this court, in the exercise of its high prerogative, will disregard all narrow-minded and technical refinements and look only at the equities of the controversy in order to mete out substantial justice. The primary object of courts is to administer substantial justice and not merely to enforce artificial rules of practice and indulge in nebulous refinements of reasoning.

In disposing of the question raised by the assignment of error now under consideration the court of appeals said:

"Several of the assignments of error are directed "to the instructions given by the court to the jury "upon the subject of damages. There was testimony "to the effect that the defendant in error in the years "1881-82-83-84 sold sewing machines containing "claim 1 of his invention, and that the cost of putting "the same into each machine was $1.50 and that his "net profit on each machine sold containing claim "1 was $3.50, and that when the plaintiff in error "put upon the market a machine which contained "the infringing device, and sold the same at a lower "price than that at which the defendant in error has

" sold, the business of the latter was injured and he
" was compelled to withdraw from the field. The
" court instructed the jury as follows: 'The evidence
" 'as to the amount of damages claimed by plaintiff
" 'is not very satisfactory, but it may be that the ac-
" 'tual sales made by the defendant in this district
" 'of sewing machines containing the alleged in-
" 'fringing device for the period named could not
" 'have been ascertained without great labor and de-
" 'lay, and as a practical way of presenting this evi-
" 'dence the plaintiff has done all that could be rea-
" 'sonably expected under the circumstances.' That
" which the defendant did to show the extent of the
" infringement was to call upon the plaintiff in er-
" ror to disclose the number of machines it had sold
" within the district, under the Diehl patent. For
" this purpose the agent of the Singer Company was
" called as a witness. It was then agreed between
" the parties that in view of the difficulty of ascer-
" taining the exact number of such machines sold,
" the agent might estimate the same. He estimated
" the number at 12,456. The jury in assessing the
" damages apparently allowed $1.00 for each ma-
" chine sold. We do not see that the instruction
" above quoted or any of the instructions given by
" the court concerning the question of damages was
" erroneous or that the court erred in refusing to give
" instructions asked for by the plaintiff in error. The
" defendant in error had a monopoly of his own in-
" vention. He had not sold the right to any other to
" manufacture or to vend the same. He had fixed a
" price of $5.00 extra for each machine containing

" his treadle, or a net royalty of $3.50. He testified " that he was able and ready to supply the demand " for his improvement and that his market was de- " stroyed by the action of the plaintiff in error. Con- " cerning the damages sustained by a patentee from " infringement, Walker in his work on patents, sec. " 563, says: ' If he maintains a close monopoly and " 'is ready and able to furnish the whole market with " 'the patented articles he must prove by satisfactory " 'evidence the advantages gained by the infringer in " 'the unlawful use of the patent over and above the " 'advantages which he could have derived from the " 'use of similar articles unpatented and open to the " 'use of the public; or must prove the loss or falling " 'off of his own sales in consequence of the infringe- " 'ment or a loss by the compulsory reduction of " 'prices made necessary by the competition of the in- " 'fringer. The rule varies with the special circum- " 'stances of the particular case.' " Citing *Seymour* vs. *McCormick,* 16 How., 480; *Philp* vs. *Nock,* 17 Wall., 460, and *Birdsall* vs. *Coolidge,* 93 U. S., 64.

Two other instructions were given by the court on the question of damages which were excepted to, and they are embodied in assignments of error 67 and 68. These we now consider.

EXCEPTION 67. The instruction complained of by this exception reads as follows:

" On the question of damages the plaintiff claims " that by reason of using his patented device in sew- " ing machines he was enabled to sell and did sell

"sewing machines at an advanced price of $5 over "and above what he sold the same machine for with- "out his patented improvement, and that it cost him "$1.50 to put the patented feature in each of the ma- "chines; thereby enabling him to realize a net profit "of $3.50 on each machine in which his patented "feature was used. He further claims that the de- "fendant has sold large numbers of machines con- "taining a device in infringement of his *claim one,* "thereby depriving him of sales which he would "otherwise have made. If you find these facts to be "true, and that plaintiff would have made the same "number of sales of his own machines as those made "by the defendant of his machines if the infringe- "ment had not intervened, and that the plaintiff was "able to supply the demand therefor, and that the "market value of the invention covered by *claim one* "of the Cramer patent is $3.50 on each machine, "then you will be justified in estimating the damages "by multiplying the number of the machines con- "taining the Diehl structure sold by the defendant "during the infringing period by $3.50, and the "amount so ascertained will be the measure of the "plaintiff's damages, if you find that the patent is "valid and has been infringed and that the plaintiff "is entitled to damages."

This instruction embodied the correct rule of estimating the damages. On its face it relates solely and entirely to the invention covered by *claim one* and to none other.

When it is remembered that the machines which

Cramer was selling contained the invention of claim 1 only, and not of claim 2, the appropriateness of the instruction becomes apparent.

The facts were simply these: Cramer was engaged in selling sewing machines which contained the invention covered by claim 1, but not that covered by claim 2 of his patent, and those machines are represented by plaintiff's exhibit G. This much was conceded by the counsel for plaintiff in error at pages 41 and 136 of their brief in the court of appeals. The cost of putting the invention of claim 1 into each machine was $1.50, and Cramer received $5.00 more for such a machine than he had been theretofore receiving for the machine without the invention. Consequently, his profit was $3.50 on each machine containing the invention of claim 1, and that profit was realized solely by reason of the invention of claim 1. He had built up a prosperous and remunerative business, as the evidence fully shows. The Singer Company entered into competition with him and placed upon the market an infringing machine containing the invention of claim 1, which they sold at a smaller price than that at which Cramer sold. In this way Cramer's business, according to his testimony and that of his son, was broken up and he was compelled to retire. Under these circumstances, the just and

equitable rule in estimating the damages is to allow the profits which Cramer would have made on the number of machines actually sold by the infringer. The theory is that the infringer deprives the patentee of sales which he would have made if there had been no infringement, and that the damage suffered thereby is the profits which the patentee would have made on his lost sales. In other words, the infringer takes from the patentee the business which he would have done, and thereby damages him to the extent of the profits which he would have made.

It is necessary, however, to show that the patentee was able to supply the demand, and that in all probability he would have supplied it if the infringement had not occured. Mr. Walker states the rule at section 563 of his valuable work on patents, where he says:

"Sec. 563. Where no established royalty is ap-
"plicable as a measure of the damages caused by a
"particular infringement, those damages may some-
"times be ascertained by the second method: that is,
"by finding what the plaintiff would have derived
"from his monopoly if the defendant had not inter-
"fered, but which he failed to realize because of
"that interference with his rights. Where the own-
"er of a patent is able to supply the whole demand
"for the thing it covers or produces, and where

" the whole demand would go to him if not diverted
" by some infringer, it is clear that the injury caused
" by a particular infringer can be ascertained by find-
" ing what pecuniary advantage the owner of the pat-
" ent would have derived if he had supplied that
" portion of the demand which was supplied by that
" infringer. The two conditions of this rule are pre-
" requisites of its applicability. The highest author-
" ity has announced that: 'What a patentee would
" 'have made if the infringer had not interfered with
" 'his rights, is a question of fact and not a judgment
" 'of law' (*Seymour* vs. *McCormick*, 16 How., 490).
" In order to show that a patentee would in fact have
" made a particular profit, if an infringer had not
" forestalled his sales, it is necessary to show that he
" would, but for that infringer, have made those sales;
" and to that end it is necessary to show that he could
" have supplied the articles wanted, and that the per-
" sons wanting those articles would have bought
" them had no infringer interfered. *But these points*
" *may be sufficiently established without being dem-*
" *onstrated; because demonstrations would gener-*
" *ally be impossible, and because every reasonable*
" *doubt relevant thereto is to be resolved in favor of*
" *the plaintiff*. Where these facts are proved, the
" damages of a patentee will consist of the profits
" which he would have derived from the sales made
" by the infringer, if the patentee had made those
" sales; supplemented by the amount of whatever
" reduction of prices the patentee was compelled, by
" the defendant's competing infringement, to make
" even upon the goods which he did sell."

The evidence in this case was given and the instruction in question was drawn with direct reference to the rule of law announced in this section. That the instruction complies with the section the most casual comparison will show. The instruction states what the plaintiff claims as his damages, and then instructs the jury that, if they find those facts to be true, and if they find that the plaintiff would have made the same number of sales of his own machines as those made by the defendant, if the infringement had not intervened, and if the plaintiff was able to supply the demand and that the market value of the invention covered by claim 1 was $3.50, then the jury would be justified in estimating the damages at $3.50 for each infringing machine.

The testimony shows that Cramer could have supplied the demand, and every presumption exists that he would have so done. He was carrying on the business of selling sewing machines, had built up a profitable trade, had abundant credit for procuring machines, and was having them manufactured, or rather was having his device of claim 1 manufactued, at a large foundry in San Francisco. The machines had been invariably received well by the public and were sold quickly. They gave great satisfaction and

the demand for them was increasing. See testimony of Herman Cramer, pages 42 to 51, and from pages 58-60 of the record. This evidence was not contradicted in any way whatever, and we think it is sufficient, under the rule laid down by Mr. Walker, to go to the jury. Could Cramer have supplied the articles wanted? He says that he could, and the facts of the case justify the statement. Would the persons wanting those articles have bought them from him if the infringement had not intervened? Every presumption is that they would. They had been buying them before the infringement, and the presumption is they would have continued to buy them if the infringement had not occurred. It must be remembered that the law does not require that these points should be proved to an absolute demonstration, because such character of proof is impossible. All the law requires is that such facts must be proved as would reasonably justify the jury in drawing a conclusion therefrom. On this subject Mr. Walker says at section 565:

"The evidence of damages must be *reasonably* "definite in order to justify a jury in finding a verdict "for more than a nominal amount. Conjecture will "not perform the office of proof, nor can imagina- "tion take the place of calculation in this behalf.

"But this rule is not to be used to defeat the ends "of justice. * * * It is the rule that where a "plaintiff introduces evidence to show that the dam- "ages were large, and to show the amount of those "damages as accurately as the nature of the case per- "mits him to do, and where the defendant offers no "evidence upon the subject, it becomes the function "of the jury to estimate those damages as best they "can on the basis of the plaintiff's evidence."

The case of *Creamer* vs. *Bowers,* 35 Fed. Rep., 207, is directly in point. There the patentee was engaged in manufacturing and selling his patented device. He had no established royalty or license fee, but maintained the monopoly of his patent by supplying the demand himself and realizing profits therefrom. The infringer made and sold infringing machines, and the damages were estimated by finding the number of infringing machines sold by the defendant and allowing the plaintiff for each one thereof the amount of profits which he would have made thereon if he had sold them himself. Regarding first the rule of damages in such cases, it was found to be in strict accord with section 563 of Walker, quoted above, and in support thereof the opinion says:

"The rule for estimating damages sustained by a "patentee, by an infringement, varies according to

"the mode in which he uses his patent. Where he "has fixed a royalty or license fee for making, us- "ing or selling the patented article, the amount of "such fee or royalty will be the measure of his loss, "and his damages can be readily ascertained by mul- "tiplying that amount by the number of infringing "articles; but if he maintains a close monopoly, and "is ready and able to furnish the whole market with "the patented articles, he must prove by satisfactory "evidence the advantages gained by the infringer "in the unlawful use of the patent, over and above "the advantages which he could have derived from "the use of similar articles, unpatented and open to "the use of the public; or must prove the loss or fall- "ing off of his own sales in consequence of the in- "fringement, or a loss by the compulsory reduction of "prices made necessary by the competition of the in- "fringer. The rules varies with the special cir- "cumstances of the particular case. (*Livingstone* "vs. *Woodworth,* 15 How., 546; *Seymour* vs. *Mc-* "*Cormick,* 16 How., 480; *Mayor vs. Ransom,* 23 "How., 487; *Mowry* vs. *Whitney,* 14 Wall., 620; "*Philps* vs. *Nock,* 17 Wall., 460; *Birdsall* vs. *Cool-* "*idge,* 93 U. S., 64, and several others.)"

That rule fits our case precisely. Cramer charged no royalty or license fee, but made and sold the patented machine himself, and realized his profits from such sales. He was able to supply the whole market. The defendant interfered by selling infringing machines, and by such course broke up his business en-

tirely. It is a reasonable presumption, therefore, that, if the infringement had not occurred, Cramer would have continued to supply the market, and would have made the sales which the defendant made. Hence, his damages are measured by the amount of profit which he would have made on the lost sales, but which he was prevented from making by reason of the infringement.

And in commenting on the character of the evidence required in such cases of a patentee, the opinion in *Creamer* vs. *Bowers* proceeded as follows:

" It is further objected that there was no satisfac-
" tory proof that, if the defendants had not infringed,
" they would have purchased from the complainant
" patented registers equal in number to the infring-
" ing registers made and used by them. That the de-
" fendants would have made such purchase is a rea-
" sonable conclusion from the evidence. It is certain
" that they made large purchases at first, and that they
" did not, during the time they were infringing,
" wholly cease buying from the complainant, and
" their conduct convinced the master that in all
" probability they would have continued to
" buy at the same rate as formerly if they
" had not infringed. This cannot be considered
" as a conjectural or speculative inference from
" the facts proved. It is true there may be a possible
" doubt on the subject, but in cases of wanton in-
" fringement, every doubt and difficulty would be re-

"solved against the infringer. (*Rubber Co.* vs. *Good-*
"*year*, 9 Wall., 803.) All that is necessary to prove act-
"ual damages is to furnish some reasonable basis or
"*data* on which to calculate them, and whenever the
"evidence is sufficient to show the pecuniary loss suf-
"fered by the complainant, he is entitled to be reim-
"bursed, no matter whether the infringer gained
"anything by the infringement or not. (Walk. Pat.,
"sec. 565; *Seymour* vs. *McCormick*, 16 How., 480;
"*New York* vs. *Ransom*, 23 How., 487; *Truck Co.*
"vs. *Railroad Co.*, 2 Fed. Rep., 681; *Zane* vs. *Peck*,
"13 Fed. Rep., 475; *Hall* vs. *Stern*, 20 Fed. Rep.,
"788; *Hobbie* vs. *Smith*, 27 Fed. Rep., 662; *Royer*
"vs. *Coupe*, 29 Fed. Rep., 358; *Lock Co.* vs. *Sar-*
"*gent*, 117 U. S., 552; 6 Sup. Ct. Rep. 934; *Roemer*
"vs. *Simon*, 31 Fed. Rep., 41.)"

In other words, the law does not require impossibilities. All it requires is such an amount of proof as would justify reasonable men in deducing a correct inference therefrom. It does not require demonstration. It does not require that the plaintiff Cramer should have called the 12,456 persons who bought the infringing machines from the Singer Company, and have put them on the witness stand and proved by each one of them that he would have bought Cramer's machine if the infringement had not occured. This seems to be about the line of reasoning followed by the learned counsel for the Singer Company when he says that there is no evidence to

show that these people would have bought the Cramer machine if they had not bought the infringing one. Of course the law does not require any such impossibilities from Cramer. All that was required of him in that regard was such an amount of evidence as would justify reasonable men in presuming that he would have made those sales, or at least some of them, if the infringement had not intervened. That was purely a matter for the jury to decide, for there certainly was not an entire absence of evidence on the subject. It must be remembered, also, that the evidence which was introduced on the subject was not contradicted in any manner whatever, but on the contrary its truth seems to have been conceded.

Under these circumstances the only question embodied in this exception is whether the rule of law announced by the court is correct. As stated above it was taken from a standard text-book on the subject, and we apprehend that as a rule of law there can be no question about its correctness.

But in any event the plaintiff in error was not injured by this instruction, even if it had been error to give it, which we vigorously deny. According to the instruction $3.50 should have been allowed on each of the infringing machines, and as the undisputed evidence, furnished by the Singer Company,

showed sales of 12,456 infringing machines, the verdict should have been for $43,596. The verdict that was rendered was for $12,456. Clearly, therefore, the plaintiff in error was not injured by this instruction. Indeed the plaintiff in error ought to congratulate itself in having escaped with so light a verdict. The defendant in error is the one who ought to complain, if any one does, for according to the instruction he was entitled to a verdict more than three times as large as the one he got. If our adversaries should now take the position that the jury estimated the damages at haphazard and without following any rule, the answer is that there is no exception reaching that point, and if they had desired to take advantage of it they should have done so by motion for a new trial in the lower court.

EXCEPTION 68. This instruction, which was given by the Judge in his general charge and of his own motion, reads as follows:

"The evidence as to the amount of damages "claimed by the plaintiff is not very satisfactory, but "it may be that the actual sales made by the defend- "ant in this district of sewing machines containing "the alleged infringing device for the period named, "could not have been ascertained without great labor "and delay, and as a practical way of presenting this

" evidence the plaintiff has done all that could be rea-
" ably expected under the circumstances."

There was no error in this instruction. Indeed, it is more favorable to the Singer Company than to Cramer. It related to the number of sales of infringing machines sold by the Singer Company. In order to fix the number of such sales we called Mr. Chandler, the agent of the Singer Company, who had charge of their business here, and agreed that he might estimate or average the number of sales made by the Singer Company. According to his average they amounted to 12,456. (See testimony of R. A. Chandler, from page 189 to 192 of the record.) Mr. Chandler gave his figures, and they were adopted by the court, as will be seen by reference to that portion of the court's charge contained on page 426 of the record. The grand total amounts to 12,456. It is a little difficult to perceive any error prejudicial to the plaintiff in error in this matter, as we took its own figures for the number of machines it had sold.

EXCEPTION 66. This exception relates to the question of the statute of limitations, and it challenges the action of the circuit court in instructing the jury that under section 4921 of he Revised Statutes, as amended by the act of March 3, 1897, the statute of

limitations applicable to this case was six years. The defendant contended that the proper statute of limitation to be applied in this case is the statute of limitations enacted by the State of California. This point is scarcely worthy of consideration; but as our learned adversaries seem bent on thrashing out every conceivable point, whether good, bad, or indifferent, we are compelled to take notice of this one.

Prior to March 3, 1897, there was no federal statute of limitations in existence, and this court held in the case of *Campbell* vs. *Haverhill,* 155 U. S., 610, that in the absence of legislation thereon by Congress, the various state statutes of limitations applied to cases for the infringement of patents. To meet this emergency the act of March 3, 1897, was passed, which amended section 4921 of the Revised Statutes by providing a uniform statute of limitations of six years throughout the United States. When the case at bar was tried that statute was in force, though it had not been passed at the time the suit was commenced. But it is well settled that statutes of limitation relate to the remedy and not to the right, and it has been frequently adjudged that such a statute, which was in existence at the time a particular suit was begun, may be changed before the suit is tried

and will apply in its changed form to the cause of action. If, therefore, the California State statute of limitations was in force at the time this action was commenced and said statutory period was less than six years, it was competent for Congress to enact a new and different statute of limitations which would apply to this case as well as to all other causes of action for infringement of patents which were untried at the time of the passage of the act. In fact the statute in question expressly provides that it applies to "existing causes of action." Hence, there was no error in ruling that the Federal statute of limitations of six years was applicable to this cause of action, and we cite the following authorities on the point:

Campbell vs. *Holt,* 115 U. S., 622.
Drury vs. *Henderson,* 143 Ill., 320.
Landa vs. *Obert,* 78 Texas, 46.

VI.

INSTRUCTIONS GIVEN AND REFUSED ON MINOR MATTERS CONCERNING WHICH ERROR IS ALLEGED.

Under this batch of instructions, the learned counsel specifies the following exceptions: Nos. 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31,

32, 33, 34, 35, 38, 39, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65.

It would subserve no purpose of utility to examine each one of these numerous instructions in detail. Therefore we can make only a passing comment.

EXCEPTION 14 relates to the rule of law concerning the proof necessary to establish prior invention. The specification of error is on page 816, and the request for the instruction is on page 437 of the record. It is sufficient to say that this specification of error is unavailing, because the instruction was in substance given by the court in the general charge, where almost the identical language was used. (Rec., 422.) The court merely refused to use the precise language of the counsel, preferring to use its own language, but with a slight modification. A person would be hypercritical indeed who could find any difference in substance between the request as made by the counsel and the instruction as given by the court.

EXCEPTION 15. This appears on page 401, and the specification of error relating to it appears on page 437 of the record. In substance it is that in determining what was Cramer's invention the jury should refer to the file-wrapper contents of Cramer's

application for a patent. But such is not the law. The jury has nothing to do with the file-wrapper. It is the duty of the court to tell the jury what the invention is, by construing the claim, and in so doing the court had a right to refer to, and as a matter of fact did refer to, the file-wrapper contents; but to expect a jury to wade through the interminable details of the file-wrapper, and try to find out therefrom what is the invention, is not only contrary to the law, but is expecting too much of a jury.

In answer to this exception, therefore, we say that it was the duty of the court to construe the claim, and not of the jury. Consequently, the exception is bad. But however that may be, the file-wrapper contents were read to the jury and were before the jury when they were deliberating on their verdict.

EXCEPTION 16. This exception relates to the rule of law as to what constitutes a primary invention. Possibly it contains a correct exposition of the law on that subject, but it bears no relevancy to the facts in hand. The court instructed the jury what the invention was, and left them to find whether or not it had been infringed. The fact of infringement was the material one to be considered, not the question of pioneership of the invention.

But further than this, the proposed instruction was nothing more than a statement of an abstract question of law, and it is never proper to give such instructions to a jury. It merely confuses them, and does not tend in any way to aid them in reaching a correct verdict. Courts have again and again refused to give instructions on abstract propositions of law; and this is but another illustration of the vicious practice pursued by some counsel of copying abstract propositions of law from text-books and adjudicated cases and asking a court to read them to a jury. This practice has always been condemned by courts as being highly improper.

EXCEPTION 17. This proposed instruction was incomplete, confusing, and misleading. There was no occasion whatever to give it. In the first place it is incorrect, because it says that "the first claim of the "Cramer patent has reference *only to the vertical* "*double* brace joining the legs of the two ends of a "sewing machine."

This is not true as a matter of fact or law. Cramer's invention does not have reference *only to the vertical double brace*. He has no claim for a double vertical brace, but a claim for a combination of several elements, one of which is the said brace. If this

instruction had been given, the jury would have been misled into the error of believing that Cramer had a claim for the vertical double brace. This is too apparent to be questioned.

Furthermore, another portion of the instruction is wrong, for it says that if the jury believes that the defendant's treadle " is hung in the cross-bar of said " machine and not in the vertical double brace, then " the verdict should be for the defendant." This was wrong, because it was an admitted fact that the Diehl treadle was hung in the brace and not in the cross-bar. An inspection of the machine shows this. And furthermore, the Diehl patent so states and the Singer Company's catalogues, already referred to, make a similar statement. Exhibit P, representing the infringing machine, likewise shows the fact. In the face of such indisputable evidence as this, it is somewhat astonishing that such request as the one under discussion should have been asked.

EXCEPTION 18. This exception is also but a statement of abstract law, not proper to be given. But even in that light it is not a correct statement of the law, for it says that a patentee should set forth in his specification "the principle and the several modes " in which he has contemplated the application of

"that principle," etc., etc. Such is not the requirement of the law. The patentee must specify *only one mode,* and that must be the best one in which he has contemplated applying his principle. He must not set forth *several modes.* The Patent Office will not allow him to do it. For that reason Cramer set forth only *one* mode. Therefore, if this instruction had been given, it would have been erroneous.

Concerning this proposed instruction, the learned counsel said, at pages 201-202 of his brief in the court of appeals, that it is good law because "every "word of it is in the language of the supreme court "of the United States, except the word 'patentees' is "inserted before the word 'description' in the first "line. The instruction is quoted word for word "from the case of *Burr* vs. *Duryee,* 1 Wall., 570."

It is true that the language of this proposed instruction is taken from the decision of the supreme court in the case cited by counsel, but he did not tell your Honors that it is no longer law. It was abrogated more than thirty years ago. By reference to the old and ancient patent act of 1836, it will be found that section 6 thereof provides that, when an applicant applies for a patent on a machine, "he shall fully ex-

" plain the principle and the *several modes* in which " he has contemplated the application of that prin- " ciple," etc. In the case of *Burr* vs. *Duryee,* 1 Wall., 570, referred to by counsel, this language is quoted by the supreme court from the said patent act of 1836, and the same language is quoted by the learned counsel in his proposed instruction to the jury. The case of *Burr* vs. *Duryee* was decided in 1863, while the patent act of 1836 was in force. But in 1870 the patent act of 1836 was abolished, and a new act, known as the consolidated patent act of 1870, was passed in its stead, and afterwards, in 1874, the revised statutes were compiled, which perpetuated the consolidated patent act of 1870, so that the present law found in the revised statutes is now the law of the land. Section 4888 of the revised statutes corresponds to section 6 of the patent act of 1836, and by reference to said section 4888 it will be found that, instead of the words, "The *several modes* in " which he has contemplated the application of that " principle," there have been substituted the words, " And *the best mode* in which he has contemplated " applying that principle."

In order to more clearly define the difference between the two sections, we place them in parallel columns.

SEC. 6, PATENT ACT OF 1836.	SEC. 4888, REVISED STATUTES.
"And in case of any machine shall fully explain the principle and *the several modes* in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions."	"And in case of a machine he shall explain the principle thereof and *the best mode* in which he has contemplated applying that principle, so as to distinguish it from other inventions."

Thus it will be seen that under the old law of 1836 the applicant must specify the *several modes* in which he has contemplated applying his principle, while in the present law he must specify *only one mode,* viz: the best mode. The distinction is apparent at a glance. Consequently, the proposed instruction we are now considering was improper, because it undertook to give to the jury as law the provision of a statute which had been abolished thirty years ago.

All the remainder of the proposed instruction, which relates to questions of principle and mode of operation, ideas, abstractions, and matters of that sort, was nothing more than general abstract principles of law not proper to be given. All that was necessary on that subject, however, was given by the

trial judge in his general charge, as will be seen by reference to pages 418-19 of the record.

EXCEPTION 19. This exception relates to the construction of claim 2 of the Cramer patent. It was not necessary nor was it proper. The court had already told the jury that only claim 1 was charged to be infringed, and that was all that should have been said regarding claim 2. It matters not what claim 2 covered, since the jury was given to distinctly understand that it was not charged to be infringed, and no damages were sought in respect to the same. But the instruction itself was wrong, because it stated that the patent must be considered just as though it never had in it the essential elements of claim 2.

EXCEPTIONS 20, 21 AND 22. These all relate to the same subject matter as Exception 19, and the answer made to Exception 19 applies to each of these.

EXCEPTION 23. This exception relates to the definition of a combination claim. It is another illustration of a statement of abstract law. And furthermore, it was confusing and misleading, and probably would have been unintelligible to the jury. There never was any contention on our part that Cramer's claim protected or covered the elements of his combination singly and individually. That was not a

factor in the case. Consequently, there was no necessity for such an instruction. Furthermore, the court, in its general charge, defined a combination and sufficiently instructed the jury on the law regarding such claims.

EXCEPTION 26. This proposed instruction was confusing and misleading. It was likewise defective, because it told the jury that Cramer's claim could not be infringed unless the defendants had used "the "combination of mechanical devices that are cov- "ered therein," and it made no mention of equivalents. That claim, and every other combination claim, would be infringed by using the combination of mechanical devices specified in the claim or their mechanical equivalents. The omission to refer to mechanical equivalents renders the instruction defective.

EXCEPTION 27. This instruction was substantially given by the court. Hence, it was no error to refuse it as framed in the words of the counsel.

EXCEPTION 28. This proposed instruction relates to the equivalency of trunnions and point-center screw-bolts. If it had been given, it would have taken away from the jury a decision on a question of fact. In substance, it told the jury that the screw-bolts were not the equivalents of the trunnions; but

that was the precise fact which the jury had to pass on. It was their province to say whether they were equivalents or not. It was the duty of the court to tell the jury, and the court did tell the jury, what, in law, were mechanical equivalents, and after having done so, it remained only for the jury to apply the court's instructions to the case of the trunnions and the screw-bolts, and then to determine as a question of fact whether those screw-bolts did perform the same function and in substantially the same way as the trunnions. This the jury did; but if the instruction had been given, they would have been required to find in one particular way on a question of fact.

EXCEPTION 29. This proposed instruction relates also to the equivalency of the trunnions and screw-bolts. It is very confusing, to say the least, but it was given, in substance, by the court, as will be seen by reference to page 425 of the record, where the court said to the jury: "If you believe from the evidence "that the screw-bolts with their point-centers which "were used by the defendant did not operate in sub-"stantially the same way in which the trunnions of "the plaintiff's patent operated, your verdict should "be for the defendant."

Upon comparing this statement as given to the jury by the court with the proposed instruction, they ap-

pear to be identical; therefore, it becomes the duty of the learned counsel for the plaintiff in error to explain to this court why he alleges this matter as error. Inasmuch as the instruction was given, how can he allege that it was not given? This seems to us like trifling with the court, and for his own sake we trust that counsel will explain himself.

EXCEPTION 30. The same answer applies to this as to exception 28. If it had been given, it would have taken away from the jury their decision on a question of fact, and would have practically amounted to an instruction to find for the defendant, on the ground that the screw-bolts and trunnions were not equivalents.

EXCEPTION 31. This is another abstract proposition of law which has no relevancy to the case. We shall not stop to inquire whether, as an abstract proposition of law, it be sound or unsound. What we say is that the proposition of law involved in it was not an issue in the case at bar and has no relevancy thereto. The jury were fully instructed in regard to the character of combination claims, and as to equivalents and matters of that kind, and there was no necessity to read to them a homily on the law of combinations, abounding in long and prosy definitions

and in fine-spun metaphysical distinctions unintelligible even to the trained mind of an expert, to say nothing of an ordinary juryman. Take this proposed instruction 31, read it over carefully, analyze it, and try to find out the exact thought it is intended to convey. We defy any man to say what it does mean. It is so exceedingly technical and abstruse that it requires a person more versed in patent law than we are to detect its hidden meaning. Such instructions are not proper for a jury. They do not assist the jury, but, on the contrary, confuse them.

EXCEPTIONS 32-33-34-35. These proposed instructions do not embody a correct proposition of law. They seek to limit the Cramer invention to the exact and precise form shown in his drawings, and do not allow him the doctrine of mechanical equivalents. Claim 1 has appended to it the words, "substantially as specified." This means that the invention is not limited to the device exactly and precisely as described, but *substantially* as described. This is the same proposition we have heretofore discussed under the doctrine of equivalents. The contention embodied in these proposed instructions is to the effect that Cramer is not entitled to the doctrine of equivalents in any manner whatever. Our conten-

tion is that, whatever may be the character of his invention, whether it be broad or narrow, whether it be of transcendant utility or small utility, it is entitled to the doctrine of equivalents, because the law is well settled that all inventions are entitled to that doctrine in one way or another. If these proposed instructions had been given, they would have mutilated and wiped out that doctrine of law which has been laid down with such emphasis by this court.

EXCEPTION 38. This is another statement of abstract law which has no particular relevancy to the case, and which is likewise confusing and argumentative. If the jury could have dug out from its mass of verbiage its hidden meaning, a task which we do not believe they were capable of performing, they would have merely realized another instance of the biblical simile of two grains of wheat in two bushels of chaff.

EXCEPTION 39. The substance of this instruction was given by the court in the general charge. (See page 424 of the record.)

EXCEPTION 43. In this proposed instruction, the counsel copied from various and sundry dictionaries various and sundry definitions of the word "skill," and asked the court to read them to the jury. The

inappropriateness of pursuing such a course scarcely needs argument. It is not proper to read to a jury from a selection of dictionaries the various definitions given by the different lexicographers of a certain word, and especially such an ordinary word as *skill.*

But there is another reason why these proposed instructions were wrong, and it is this. The particular question at issue was not *skill,* but *mechanical skill.* There is a difference between the terms. Consequently, it was not proper to give the jury the definition of *skill* in order to enable them to find out the meaning of *mechanical skill.*

But a still further answer is found in the fact that the court explained to the jury and defined the term mechanical skill, and gave to them all the information necessary on the subject. By reference to pages 420-1 of the record it will be seen that the court gave an instruction concerning mechanical skill which embodied the correct law on the subject.

EXCEPTION 44. This is another proposition of abstract law, unintelligible and confusing to a jury. It was no error to refuse it. To have given it would have been to confuse and obscure the issues. All that was necessary to be given on the subject embodied in

the proposed instruction was given by the court, as will be seen by reference to pages 420-1 of the record.

EXCEPTION 45. The substance of this proposed instruction was given by the court in its general charge. (See page 420—bottom paragraph—and page 421—second paragraph—of the record.)

EXCEPTION 46. This proposed instruction relates to the general proposition of law that a patentee must be the original and first inventor of the device covered by his claim. We think this point was sufficiently covered by the judge's charge. He instructed them fully on the question of anticipation, telling them, in substance, that if they found that the device covered by Cramer's claims had been in existence prior to the date of his invention, either in the shape of prior patents or prior use, then the Cramer patent was void. They understood fully that Cramer must be the first and original inventor in order to have a valid patent, and the whole charge of the court from beginning to end shows this.

EXCEPTION 47. This proposed instruction undertakes to give a definition of the term "invention," a thing which it is not possible to do. The definition given in this proposed instruction is entirely faulty,

in that it is not complete or exhaustive. Of course, an invention must involve "the finding out and con- "structing or discovering for the time something that "was not before known." But it is equally true that everthing so found out and constructed or discovered is not an invention within the sense of the patent law. This proposed instruction is really more favorable to Cramer than to the plaintiff in error, and, therefore, it could not have injured the plaintiff in error by being rejected. But, however, the definition is faulty and incomplete, and for that reason alone it should not have been given.

EXCEPTION 48. The substance of this proposed instruction was given by the court, as will be seen by reference to the record. (Pages 420-1.)

EXCEPTION 49. The substance of this proposed instruction was likewise given by the court. (See pages 420-1 of the record.)

EXCEPTION 50. This proposed instruction was faulty, because it was argumentative and a statement of abstract law.

EXCEPTION 51. This proposed instruction is liable to the same objection as the one last considered. It is argumentative, confusing, metaphysical, and

abstract. All that was necessary to be said on the subject was given by the court in his charge.

EXCEPTION 52. This is liable to the same objection as the last.

EXCEPTION 53. The substance of this proposed instruction was given by the court. (See pages 420 and 421 of the record.)

EXCEPTION 54. The substance of this proposed instruction was also given. (See page 420 of the record.)

EXCEPTION 55. The substance of this was likewise given. (See pages 420-1 of the record.)

EXCEPTION 56. The subject matter of this proposed instruction is sufficiently covered by the charge of the court. (See pages 423-4 of the record.)

EXCEPTION 57. This is a portion of the charge which was given by the court. (See pages 418-19 of the record.) It clearly states the law on the subject. Not even the most hypercritical could find any fault with it.

EXCEPTIONS 58-59. The same remark applies to these as to the preceding.

EXCEPTIONS 60, 61, 62, 63, 64, 65. These relate to the question of infringement. The charge of the

court on that subject is found on pages 423, 424, and 425 of the record. The language there used is very carefully worded, being practically the language used by other courts in adjudicated cases.

Concerning exception No. 60, the counsel seems to think that by it the court intended to tell the jury that Cramer's patent could be infringed, although the defendant had used only one of the elements of his combination; but such construction of the language of the court is very strained. By reference to the language in question, it will be seen that the only idea which the learned judge intended to convey to the jury was that it was an infringement of a patent to either *make, use,* or *sell.* He desired by the language to impress on the jury that either one of those three things was an infringement. Clearly, that was the thought attempted to be conveyed in that portion of the charge against which exception No. 60 is made, and it is unjust to the trial judge to attribute to that language the meaning that a combination claim could be infringed by using less than all of its elements.

As to exception No. 61, that is aimed at a portion of the charge appearing on pages 423-4. The learned counsel has never favored us with any special criti-

cism of this portion of the charge, and we are at a loss to understand why he charges it to be error. It is certainly in strict accord with the decision of this court in *Machine Co.* vs. *Murphy,* 97 U. S., 125.

Exception No. 62 is likewise aimed at a portion of the charge contained on pages 423-4. That particular portion of the charge is copied from the charge to the jury given by Judge Clifford in the celebrated case of the *Union Sugar Refinery* vs. *Mathiessen,* 2 Fish., 626. It is scarcely possible to cite a higher authority than Judge Clifford, but in order to satisfy the counsel even on that score we will say that the language used by him in that case in charging the jury was adopted and approved by this court in *Machine Co.* vs. *Murphy,* 97 U. S., 125. And yet in the face of these facts, the counsel asserts that the judge of the lower court erred. If the adoption of the language of Judge Clifford, used in charging the jury on the same point in another case, and followed by this court, is error, then the judge of the lower court erred in the case at bar. Otherwise, he did not.

Exception 63 is directed to a portion of the charge appearing on pages 423-4. The learned counsel says it is bad law, and condemns it in the most caustic

terms. In reply, we beg to say that this section of the charge is taken almost word for word from the charge of Judge Sawyer, given to the jury in the case of *Carter* vs. *Baker,* 1 Sawy., 512. And furthermore, our learned brother Wheaton was attorney for the plaintiff in that case, and we doubt not that the excellent charge of Judge Sawyer was inspired by his argument. Perhaps the learned counsel himself drafted that instruction. If he did, it will forever remain a monument to his wisdom and ability, for it has been cited and approved in numerous cases as being a correct exposition of the law.

As to exception 64, the criticism of the counsel is too frivolous to merit serious consideration. He objects to the use of the word "upon," and insists that it should have been the word "over." The court had spoken of the Diehl machine as an improvement "upon" Cramer's, and the learned counsel says that it should have been referred to as an improvement "over" Cramer's. If your Honors can see any difference between these two expressions, it is more than we can. Indulgence in such metaphysical refinements appears to us trifling with the court.

Exception 65 objects to that portion of the court's charge appearing on page 424, because, the counsel

says, it was telling the jury, in effect, that the Diehl stand would infringe if there was one single element in it that was in Cramer's combination. We do not so construe the language, and certainly the learned judge below never intended that it should have any such meaning.

CONCLUSION.

We must apologize to the court for the length of the foregoing brief, but this was due to the large number of assignments of error, and to the fact that we have not yet been favored with a copy of the petitioner's brief. It is possible that the learned counsel for petitioner will not argue all his assignments of error found in the record, and may abandon some of them, in which event all that portion of our brief relating to the abandoned assignments of error will become superfluous, and the court may disregard it.

We respectfully submit that the judgment should be affirmed.

JOHN H. MILLER,
Counsel for Respondent.

San Francisco, February 15, 1903.

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Supreme Court of the United States.

OCTOBER TERM, 1902.

No. 215.

SINGER MANUFACTURING COMPANY, PETITIONER,

vs.

HERMAN CRAMER, RESPONDENT.

Additional Brief on Behalf of Herman Cramer.

By permission of the court we say a few words in answer to the petitioner's brief:

I.

EXCEPTION TO REFUSAL OF COURT TO INSTRUCT JURY TO RETURN A VERDICT FOR DEFENDANT.

We do not care to say anything on the merits of this proposition in addition to what was said in our opening brief, but we do desire to point out several inaccuracies of statement made under this heading in the brief of counsel for petitioner.

1. It is constantly asserted that the "Diehl treadle is hung in the old common cross-bar and not in or on the old vertical cross-brace" (p. 29).

This is not correct. The Diehl treadle *is* hung in the old vertical brace and is *not* hung in the old common cross-bar.

The specification of the Diehl patent, after describing the old vertical brace and treadle, says:

"This treadle is supported in the lower portion of said brace."

All the claims of the patent, except the fifth, specify, in substance, that the treadle is mounted in the brace. The fifth claim reads as follows:

"A cross-brace for sewing-machine stands, having at its base a cross-bar, combined with a treadle mounted in said cross-bar," etc.

This means that the cross-bar is the lower end of the brace, an integral part of the brace. It does not refer to "the old common cross-bar" and is not the same. The old common cross-bar was merely a rod joining the two legs of the machine and binding them together. That device is not found in the Diehl patent at all. He has dispensed with it. The thing which he calls "a cross-bar" is not the "old common cross-bar," but is nothing more nor less than an integral part, the lower end of the vertical brace.

Furthermore, the Singer catalogues state that the treadle is "entirely supported within the brace" (Rec., p. 51).

2. At page 55 of counsel's brief it is asserted that "there is no testimony in this case from any user of the device of

the Cramer patent, purchasing the same of Cramer, that it has any value."

We reply that Mrs. Abbott testified that she used a Cramer machine "for ten years steady" (Rec., 155), and that it gave perfect satisfaction; and witnesses Brown and Lawlor, although they had not used the machine, testified that the invention was of great value.

Herman Cramer, Herman Cramer, Jr., and L. W. Seely also testified as to its great value.

All this testimony must be taken as true on this hearing.

3. It is asserted by counsel that since the expiration of the Cramer patent no manufacturer has adopted the Cramer device or hung its treadle in the brace (Rec., 56). Were this a fact—and we vigorously and emphatically deny that it is a fact—it would not be material. This case must be heard on the record which was before the lower court, and not on something alleged to have occurred since then.

Furthermore, the only way by which this alleged fact is claimed to appear is by an *ex parte* statement of the petitioner in its application for the writ of *certiorari*, which we had no opportunity to deny. Surely counsel cannot suppose that said *ex parte* statement of his client is a part of the evidence, much less an undisputed fact in this case, to be considered by the court in deciding whether the lower court erred in the trial.

4. At page 57 it is said by counsel that "the testimony and the old art show, however, that every advantage claimed for the idealized construction of the Cramer patent by his counsel is present time and again in the old art and

in sewing machines, and for thirty years has been there present and not departed from."

This statement is not supported by the record. (See testimony of H. Cramer, Rec., pp. 38–40; L. W. Seely, Rec., p. 120; A. C. Brown, Rec., pp. 160, 161; Jos. Lawlor, Rec., pp. 185–188; H. Cramer, Jr., Rec., pp. 175, 176; Mrs. Abbott, Rec., p. 155.) The testimony of these witnesses is to the contrary of counsel's position.

It may be that counsel meant to say that some of his own witnesses testified as he asserts. If that is his position, the answer is that it raised a conflict of evidence on a question of fact which was for the jury alone to pass on and cannot be reviewed here.

5. On page 66 of counsel's brief he has misquoted the decision of the Court of Appeals, in that on line 8 of the quotation there appearing, before the word "treadles," he has omitted the words "bearings of the." (See Rec., p. 459.)

6. At page 89 counsel again misquotes said decision. At the bottom of that page he asserts that the court instructed the jury: "If you determine that the Diehl structure is in some respects an improvement, *but not otherwise* an infringement," etc., etc.

The instruction as given was: "If you determine that the Diehl structure is in some respects an improvement, *but in others* an infringement," etc. (See Rec., p. 424.)

II.

Damages.

Counsel has argued this question generally, asserting that there was no evidence whatever of any damages; but there is no assignment of error broad enough to reach the point. The only assignment of error he relies on in this regard is No. 25, argued in our opening brief at pages 230 *et seq.* That assignment, however, goes only to the question of segregation of damages, contending that there was no evidence to show how much of the damages was due to claim 1 *alone*. There is no assignment of error on the subject of damages generally under which this point can be reached. The only assignments of error on the subject of damages in any phase are Nos. 24, 25, 66, 67, and 68. No. 24 was substantially given. (See p. 230, our opening brief.)

No. 25 relates solely to segregation of damages between different claims;

No. 66 relates only to the statute of limitations;

No. 67 relates only to the measure of damages; and

No. 68 is more favorable to Singer than to Cramer.

But in any event there was some evidence of damages. Permit us to marshal the facts in logical sequence, viz:

1. Cramer was a manufacturer and seller.

2. He granted no licenses.

3. He first made a small batch of the patented devices, six or seven, at Sonora, and they met with ready sale, but cost too much.

4. He then had manufactured at San Francisco thirty-five or forty at a cost of $1.50 each.

5. These he sold at an advance of $5 on each machine.

6. These sales were made up to 1885.

7. After these sales were made Cramer entered into negotiations with eastern manufacturers to manufacture the devices for him on a large scale and at a low figure.

8. At that stage the Singer Company entered the market with the infringing machine, selling at $5 less than Cramer.

9. The result was that Cramer's business was ruined and he had to retire and go to law.

10. He was able to supply the whole demand; and

11. The presumption is strong that he would have supplied that demand if the infringement had not occurred.

Cramer testifies to all the above facts, and in many of them he is corroborated by Herman Cramer, Jr., and Mrs. Abbott. When we add that the invention is one of great value, it seems that the facts were sufficient to go to the jury. That is all we have to show.

Petitioner's position is the assertion that Cramer ceased selling in 1885, and that the Diehl machine did not reach Cramer's territory until 1886 or 1887.

1. In the first place, Cramer fixed no specific date when he ceased selling, but says it was along about 1884 or 1885 *when they came up there with the Diehl machine.* (See opinion

Court of Appeals, Rec., p. 464.) While not clear as to the exact date, he was clear that it was when the Singer Company came in with the infringing machine.

Herman Cramer, Jr., corroborates the testimony (Rec., pp. 177, 178, 179). He testifies that the Diehl machines appeared in 1884 or 1885 and drove his father out of business.

2. In the next place, it does not appear, as counsel asserts, that the Diehl stand did not appear in California until 1886 or 1887. To prove this the company called Mr. McMillan, the receiving and shipping clerk of the company at San Francisco. He testified that he had examined the books of the company, and the first invoice of Diehl stands he was able to find therein was on April 14, 1886, from which fact he assumed that none such had been received prior thereto.

On cross-examination he testified that he had no distinct recollection apart from the entry in the books; that he examined no books prior to 1885; that the books prior thereto had been sent to the reduction works and burned up.

On redirect examination counsel endeavored to make the witness swear positively that the first arrival of Diehl stands was on April 14, 1886. His answer was, "I can state it was the first that I knew of that I had seen." (For above see Rec., pp. 290–291, 308–315.)

The substance of this man's testimony is that he had no recollection apart from the books, but that the undestroyed books showed an invoice of April 14, 1886, and all books prior to January, 1885, had been destroyed.

H. F. Blanchet, the book-keeper, gave similar testimony, and also showed that the books were burned two years prior

to his testimony, which would be after this Cramer litigation began (Rec., p. 327).

Two other witnesses, Donald McKenzie and C. F. Krantz, were called as witnesses, but their testimony is of no moment.

In opposition to this the record shows that the Singer Company was advertising the Diehl stands in 1885 by catalogues and soliciting orders therefor, while Cramer, Sr., and Cramer, Jr., both testify that those stands appeared in 1884 or 1885 and drove them out of business.

Also it appears that these Diehl stands were placed on what is called the "Improved Family Singer" machine, which was abbreviated as "I. F. Singer." The catalogue of 1885 so calls them (R., p. 52), and shows the Diehl stand used therewith.

Another catalogue, opposite page 51 of Record, says that all these family machines are mounted on the new patented (Diehl) stand. Also it appears that in 1884 and 1885 the Singer Company was selling these "I. F. Singer" machines on the Pacific coast (Rec., pp. 310–311, 326). Blanchet and McMillan testified to that fact.

If all the "I. F." machines contained the Diehl stand, as stated in the catalogue, and if "I. F." machines were sold in California in 1884 and 1885, it is apparent that counsel's theory is wrong. In any event, there was a sufficient conflict in the evidence to necessitate its submission to the jury.

3. But, further, even though it should be a fact that the Diehl stands did not reach California until 1886, that would not alter the case, because the advertising of such stands and soliciting orders in 1885, offering to sell at $5 less than

Cramer, would be sufficient to break up his business, and the jury might have taken that view. We cannot conceive of a more effectual way to break up one's business than to advertise and solicit orders and offer to sell a rival machine at a smaller price.

But the truth of the whole matter is probably that the jury did not believe the Singer witnesses and did believe the Cramer witnesses. This they had a right to do, and that is no ground for reversal. The jury is the sole and ultimate arbiter of all contested matters of fact.

III.

Effect of Diehl Patent as Evidence.

The requested instructions on this point relied on by counsel are Nos. 37 and 40. (See pages 88 and 89 of his brief.)

He asserts that where a defendant is acting under a junior patent he is entitled to an instruction that such patent is *prima facie* evidence of non-infringement.

Permit us to examine this contention.

In *Corning vs. Burden*, 15 How., 270, in an opinion rendered by Mr. Justice Grier, the question of the effect of the defendant's patent subsequent in date to the plaintiff's patent, on trial of an action at law for infringement, was considered by this court for the first time. At the trial the defendant offered to read in evidence the defendant's patent, but, on the objection of the plaintiff, the court refused to allow him to do so, and this court held such ruling to be error. In rendering the decision Mr. Justice Grier said:

"This is a question on which there may be some difference of opinion. In some circuits it has been the practice, when the defendant has a patent for his invention, to read it to the jury without objection; in others it is not received, on the ground that it is irrelevant to the issue, which is a contest between a machine of the defendant and the patent of the plaintiff, and that its posterior patent could not justify an infringement of a prior one for the same invention."

The learned justice then goes on to show that under the patent act of 1793 no patent was *prima facie* evidence that the invention was new or useful, and that even the plaintiff was bound to prove those facts in respect of his own patent in order to make out a case, but that under the act of 1836 patents were *prima facie* evidence of novelty and utility. In deciding the point in hand the learned justice said:

"It is not easy to perceive why the defendant who uses the patented machine should not have the benefit of a like presumption in his favor arising from a like investigation of the originality of his invention and the judgment of the public officers that his machine is new and not an infringement of the patent previously granted to the plaintiff. It shows at least that the defendant has acted in good faith and is not a wanton infringer of the plaintiff's rights and ought not, therefore, to be subjected to the same stringent and harsh rule of damages which might be justly inflicted on a mere pirate."

On that ground alone the judgment was reversed. This case does not hold, therefore, that in an action at law for infringement of a patent, where the defendant is acting under a subsequent patent, that he is entitled to an instruction to the jury to the effect that his patent is *prima facie* evidence

of non-infringement. The decision in the case quoted merely went to the fact that the defendant was entitled to put his patent in evidence. The court was very guarded in his language as to what presumption would arise therefrom, merely saying: *It is not easy to perceive* why the defendant's patent should not have a like presumption as the plaintiff's patent, and goes on to say positively, however, that it is competent to be put in evidence for the purpose of showing that the defendant is not a wanton infringer. The case holds, therefore, these two propositions: (1.) That the defendant is entitled to put his patent in evidence. (2.) That its effect, at least, is to disprove wantonness in the infringer. Those are the only two points authoritatively decided by that case.

In the subsequent case of *Blanchard vs. Putnam*, 8 Wall., 420, decided at the October term of 1868, wherein the opinion was rendered by Mr. Justice Clifford, the defendant relied on a subsequent patent and offered it in evidence. Plaintiff objected, but the court overruled the objection and admitted the subsequent patent in evidence. This court held that this ruling was error and reversed the decision, saying, among other things:

"Such evidence was inadmissible for the purpose for which it was offered, and should have been excluded, as the novelty of the invention was not open and because it presented on the question of infringement an immaterial issue, not involved in the pleadings, and because the evidence was well calculated to mislead the jury by withdrawing their attention from the real subject-matter in controversy."

It is urged, however, that this case was overruled by *Miller vs. Eagle Mfg. Co.*, 151 U. S., 186, and *Boyd vs. Janesville Tool Co.*, 158 U. S. We disagree with that contention.

In the one first cited three subsequent patents were put in evidence. No objection appears to have been made thereto, and the precise point under discussion does not appear to have been raised. In referring to these subsequent patents, all that this court says on the subject is as follows:

"Again, the issuance of the patent to Gardiner and Downing, Berlew, and Kissell and Elder creates a *prima facie* presumption of a patentable difference from that of the Wright patent of 1879."

Undoubtedly this is a correct rule of law. There may be a "patentable difference," and yet the subsequent patent may be an infringement of the prior patent.

In the second case cited, *Boyd vs. Tool Co.*, the point in hand did not arise at all. It appeared there that the applications for both the plaintiff's and the defendant's patents were pending in the Patent Office at the same time, and all that this court said in regard thereto is as follows:

"As both applications were pending in the Patent Office at the same time, and as the respective letters were granted, it is obvious that it must have been the judgment of the officials that there was no occasion for an interference and that there were features which distinguished one invention from the other."

This fact, however, seems to have played no part in the decision of the case, inasmuch as the court decided the case on the ground that the plaintiff's invention was a narrow one and did not cover the specific construction used by the defendant.

It is reasonably clear, therefore, that neither of the last-cited cases overrules the emphatic decision of this court laid

down in *Blanchard vs. Putnam*, and by no possibility can they be held to sustain the doctrine that on the trial of an action at law for infringement of a patent, where the defendant is acting under a subsequent patent, the defendant is entitled to an instruction to the jury to the effect that the granting of the subsequent patent is *prima facie* evidence of no infringement. If in such a case the subsequent patent is admissible in evidence at all, it must be only for the purpose of excusing the defendant from wanton infringement and to show, in the words of this court, that he is not "a mere pirate," and this is for the purpose of mitigation of damages.

We find support for the above conclusion in the case of *Norton vs. Can Co.*, 59 Fed., 137, wherein the opinion was rendered by Mr. Justice McKenna, then sitting on the circuit bench. That was an application to punish defendant for contempt for the violation of an injunction, and he sought to justify himself by the contention that his machine was made under a subsequent patent, and was, therefore, *prima facie* evidence of no infringement. But in the decision of the court it was pointed out that the earlier case of *Corning vs. Burden* had been overruled by the case of *Blanchard vs. Putnam*, and that the only relevancy of the subsequent patent was to show that the contempt was not willful. In other words, it merely went in mitigation of damages.

Counsel for petitioner has referred to the decision of the Court of Appeals for the ninth circuit in *Ransome vs. Hyatt*, 69 Fed., 148, in support of his contention; but that case merely holds that "the issuance of the defendant's patent creates a *prima facie* presumption of a patent-

able difference from the prior patent of the plaintiff." It does not appear from the report what was the wording of the particular instruction requested in that case, and the only kind of instruction that the Court of Appeals said the defendant was entitled to was an "instruction which would permit the jury to consider the presumption that the law creates from the fact that a patent has issued in any case."

Of course, there must be "a patentable difference" between a subsequent and a prior patent, for otherwise the subsequent patent would not issue. Such patentable difference, however, inheres only in the claim of the patent and is not commensurate with the proposition that the issuance of such a patent is a *prima facie* presumption that it does not infringe any other patent. Scarcely any improvement patent is issued which does not infringe some prior patent. And yet the subsequent patent may be valid. As soon as a person secures a patent for a broad and pioneer invention, the inevitable result is that improvements will be made thereupon by other persons, and that they will take out patents for such improvements. These subsequent patents are infringements of the prior broad patent, although there is a *prima facie* presumption that there is a patentable difference between their claims and the pioneer machine. All that this court has ever decided is that there is a *prima facie* presumption of such "patentable difference," but it has never decided in any case that there is a presumption that the subsequent patent is not an infringement of the prior patent.

IV.

Sundry Other Matters.

Most of counsel's brief is devoted to arguing the evidence, as if this were an appeal instead of a hearing on writ of error. In fine, he has argued the case *de novo*. Of course, that is improper and will be unavailing. Only errors of law will be considered. This court does not concern itself about the weight of evidence or the correctness or incorrectness of the jury's verdict. It can review only alleged errors of law on the part of the lower court.

The questions of utility, aggregation, equivalents, *et cetera*, argued by counsel, are foreclosed by the jury's verdict, there being no charge that the court erred in its instructions on those points.

The refusal of the court to instruct that a witness false in one part of his testimony is to be distrusted in others has been already answered in our other brief, from page 316 to page 322.

Only one word more. In his conclusion opposing counsel says, "This case is without a semblance of justification or palliation for its commencement or prosecution," and he further says that "speculators and adventurers are the real plaintiffs," and much more of the same tenor.

We resent this charge with indignation, and assert that there is no evidence in the record to justify such language. It may be true that Cramer, an old man now verging on the grave, is not blessed with any great amount of this world's goods, and was not able, alone and unaided, to cope with his rich and powerful adversary; but surely

poverty cannot be imputed to him as a crime, nor can he rightfully be subjected to criticism if he has sought the aid of his friends in the legal warfare he has waged for ten years.

And, furthermore, we venture to remind the learned counsel that such language is not in keeping with the time or place. It is unworthy of the learned gentlemen. Vituperation is not argument and should find no place in the dignified discussion of great legal principles before the most august judicial tribunal of the land.

Respectfully submitted.

JOHN H. MILLER,
For Cramer.

No. 18.

IN THE

Supreme Court of the United States

OCTOBER TERM, 1903.

SINGER MANUFACTURING COMPANY, *Petitioner,*

vs.

HERMAN CRAMER.

MOTION FOR LEAVE TO FILE PETITION FOR REHEARING.

Now comes Herman Cramer, the respondent in the above entitled case, by John H. Miller, his counsel, and moves this Honorable Court for leave to file a petition for a re-hearing of said case and re-argument thereof before a full bench, which said petition is as follows:

PETITION FOR RE-HEARING.

Herman Cramer, the respondent in the above-entitled case, feeling himself aggrieved by the judg-

ment of the court rendered therein on February 1, 1904, petitions this court for a rehearing thereof on the following grounds:

I.

Because the Court held that the question of infringement in this case was a question of law and not a question of fact, and for that reason was reviewable on writ of error, which holding this respondent claims was error.

II.

Because the Court held that the broad idea of mounting the treadle of a sewing machine in the vertical brace did not involve invention, in view of the fact that prior thereto oscillating and revolving shafts had been mounted in rigid bearings in other kinds of machinery, which holding respondent claims was error.

III.

Because the Court held that Cramer's claim I must receive a narrow construction and be limited to the precise details of mechanism shown and described in the specification and drawings, which holding respondent claims was error.

IV.

Because the point on which the decision is based was not raised or argued by counsel, and the respondent has not been heard thereon.

V.

Because the case was not heard by a full bench, and it is one of such gravity and importance as to make it highly desirable that it should be heard by a full bench.

ARGUMENT ON THE FOREGOING PETITION.

We feel deeply aggrieved at the decision in this case, and as the only means at our disposal for expressing such grievance is a petition for re-hearing, we herewith ask permission of the Court to file one. We are aware that this Court seldom grants a re-hearing. In fact, it has granted only thirteen during its entire existence, and most of those were simply re-arguments ordered by the Court of its own motion. But, notwithstanding these facts, we venture to request of the Court a re-hearing in this case for the reason that the opinion lays down a rule of law which is not only contrary to all the traditions and many adjudicated cases of this Court, but which, if allowed to stand, may be used as an instrument for the oppression of patentees by arbitrarily destroying a

species of property whose enjoyment has been guaranteed by the Constitution.

I.

The first point announced in the decision is that the question of infringement is a pure question of law dependent upon a mere comparison of the Cramer and Diehl patents. The exact language of the Court is as follows:

"As in each of the patents in question it is apparent " from the face of the instrument that extrinsic evi- " dence is not needed to explain terms of art therein, " or to apply the descriptions to the subject matter, " and as we are able from mere comparison to com- " prehend what are the inventions described in each " patent, and from such comparison to determine " whether or not the Diehl device is an infringement " upon that of Cramer, the question of infringement " or no infringement, is one of law and susceptible of " determination on this writ of error."

The entire decision is based upon this premise. If it is wrong, then the decision is wrong. We submit that the same is wrong and contrary to many decisions of this Court, where the true rule is announced.

Just exactly half a century ago the true rule was first announced by this Court in *Battin* vs. *Taggart*, 17 How., 84, in an opinion delivered by Mr. Justice McLean.

Afterwards in the case of *Bischoff* vs. *Wethered*, 9 Wall., 812, in an opinion rendered by Mr. Justice Bradley in 1869, the same ruling was made. No abler judge in patent matters has probably ever sat on the bench than Mr. Justice Bradley, and his opinion rendered in that case is so contrary to the opinion rendered in the case at bar that the two cannot possibly be reconciled. Both of them cannot be right. One of them must be wrong, and we earnestly request of this Court to carefully read Mr. Justice Bradley's language in the case quoted and to say whether or not it was the intention of this Court to overrule that decision. Certainly the legal profession is entitled to know which one of two conflicting decisions is to be their guide in future practice.

Afterwards in 1871, in *Tucker* vs. *Spaulding*, 13 Wall., 453, Mr. Justice Miller in the most emphatic language again laid down the rule which we contend for, specifically affirming *Bischoff* vs. *Wethered*, saying:

"This Court has no more right than the Court be-
"low to decide that one patent covered the invention
"of the other or that it did not."

In *Mitchell* vs. *Tilghman*, 19 Wall., 287, the same rule was announced in an opinion rendered by Mr. Justice Clifford in 1873.

In *Keyes vs. Grant*, 118 U. S., 25, the same identical rule was announced by this Court through Mr. Justice Mathews. That case was decided in 1876.

We also find the same rule announced by this Court in *Royer* vs. *Schultz Belting Co.*, 135 U. S., 319, in an opinion rendered by Mr. Justice Blatchford in 1890.

Five years later, in 1895, we find the same rule announced in *Coupe* vs. *Royer,* U. S., in an opinion rendered by Mr. Justice Shiras.

Thus we see that for the past fifty years it has been the ruling of this Court that in the trial of a patent case before a jury the question of infringement is one of fact and the Court cannot compare the rival specifications and determine for itself as a question of law that there is no infringement.

This ancient rule of law has been followed by the text-writers and embodied in their books as a guide for the profession. See *Curtis on Patents,* Sec. 469; *Robinson on Patents,* Vol. 3, page 378.

It is likewise the rule of law announced by the highest courts of England. See *Hill* vs. *Evans,* 31 L. J. Ch. 463, and *Betts* vs. *Menzies,* 10 H. L. Cas., 117.

Now in view of these authorities, we submit that the opinion in the present case lays down a diametrically opposite rule of law when it says:

"As in each of the patents in question it is apparent from the face of the instrument that extrinsic "evidence is not needed to explain terms of art therein, or to apply the descriptions to the subject matter, and as we are able from mere comparison to "comprehend what are the inventions described in

"each patent and from such comparison to deter-
"mine whether or not the Diehl device is an in-
"fringement upon that of Cramer, the question of in-
"fringement or no infringement is one of law and
"susceptible of determination on this writ of error."

The opinion cites two authorities in support of its doctrine, viz., *Heald* vs. *Rice,* 104 U. S., 737 and *Market Street Cable Company* vs. *Rowley,* 155 U.S., 625.

In our judgment neither of them has any relevancy. In *Heald* vs. *Rice* the question related to the identity of a re-issued patent with the original patent, and such a question has always been held to be a question of law and not one of fact. That is so well settled in the history of patent cases that it would be an act of supererogation for us to burden this petition with citations. In fact, the distinction is pointed out in the opinion in *Heald* vs. *Rice,* which cites *Battin* vs. *Taggart* and *Bischoff* vs. *Wethered,* distinctly intimating that the rule of law was different in the two instances. Mr. Justice Mathews rendered the decision in *Heald* vs. *Rice.* He also rendered the decision in *Keyes* vs. *Grant,* 118 U. S., 25, where a prior patent was set up as an anticipation, and where he distinctly stated that in such cases it was not the province of the Court to compare the two specifications and decide upon their identity as a question of law, but that it was the province of the jury to do that as a question of fact.

In the other case cited, *Market Street* vs *Rowley*, 155 U. S., 625, certain prior patents had been put in evidence as anticipation, *but no extrinsic evidence whatever was given for the purpose of explaining the terms of art used therein or of showing dissimilarities,* and this Court held that under such circumstances, that is to say, where the facts were admitted and there was *no extrinsic evidence* whatever, the question of the construction of those patents became a question of law. That is a far different question from the one here presented. The major part of the evidence offered in the case at bar consisted of extrinsic evidence on the part of Cramer to show similarity, and on the part of the Singer Company to show dissimilarity between the Cramer patent and Diehl device. The testimony of both experts and laymen was taken at great length. There was wide diversity as to the terms of art used in the patent, and diametrically opposite views thereon were advanced by the rival witnesses, thus raising a substantial conflict of evidence, so that the case was not at all similar to *Market Street* vs. *Rowley*.

Furthermore, in *Market Street* vs. *Rowley*, there was a sharp dissenting opinion by Mr. Justice Brown, in which he pointed out the fact that according to the rule laid down in *Battin* vs. *Taggert* and *Bischoff* vs. *Wethered*, the disputed matter should have been submitted to the jury. If so eminent a member of this Court as Mr. Justice Brown was of

the opinion that even in a case where no extrinsic evidence whatever was offered, the matter was one for the jury to decide as a question of fact and not for the Court to decide as a question of law, how is it possible to escape the conclusion that in a case where so huge a mass of extrinsic evidence was offered as in the case at bar, and where such a sharp conflict resulted therefrom, the matter was one of fact for the jury and not a question of law for the Court?

In his dissenting opinion referred to, Mr. Justice Brown stated the following as the true rule of law:

"Indeed, I understand it to be a general rule ap-
"plicable to all trials by jury, that if there be any
"conflict of testimony with regard to a particular
"fact, or if, the facts being admitted, men in the ex-
"ercise of reasonable judgment may derive different
"inferences from such facts, the question is for the
"jury."

We respectfully submit, therefore, that the two cases cited in the opinion in the case at bar not only do not support the theory of the decision, but are both, incidentally at least, contrary thereto. If that theory be erroneous, then clearly the whole opinion following is a *non sequitur*, for in such event the question of fact could not be reviewed by this Court. It is too well settled to admit of discussion that upon a writ of error to this Court in an action at law all contested questions of fact are deemed conclusively settled by the verdict of the jury.

II.

The opinion in the case at bar next proceeds to hold that the Cramer invention is not of a pioneer character such as to justify a broad interpretation of his claim, but is restricted narrowly to the mere details of mechanism described in the patent.

This result is reached by holding that prior to Cramer it was shown by extrinsic evidence to be a well known method of construction, when revolving or oscillating shafts were to be placed in bearings or supports in *other machines,* to have both bearings of such shafts attached to a solid metal casting, and that instances of such were to be found in saw-arbors, engine and machine lathes, and high speed engines. The Court might have added to the list the mounting of a cannon on trunnions, for such a device has been known since the days of Charles the Bold; or the similar mounting of windmills, known since the days of Don Quixote. It is not pretended that such devices were ever found in a sewing-machine. It is also pointed out in the opinion that in sewing-machines the vertical brace was old, though the treadle had never been mounted therein, and that the treadle had been mounted in the side pieces or legs. From these premises the opinion concludes:

"We readily conclude that there was no merit in "the mere conception or idea that a vertical double "brace was capable of being advantageously utilized

"as bearings for sewing machine treadles and that "the devising of means for so utilizing such a brace "did not involve such an exercise of the inventive "faculty as entitled Cramer to assert in himself a "right to claim a patent broadly for the use in com- "bination of a vertical double brace and a sewing "machine treadle."

In other words, the precise contention is that because of the fact that oscillating and revolving shafts had been mounted in solid castings in *saw-mills, machine lathes,* and *high speed engines* (remote and distant arts), it involved no invention in the sewing machine art to mount a treadle in the diagonal vertical brace. This involves the much discussed question of whether or not it is invention to apply an old contrivance to a new use.

1. *This is a question which has never been argued in the case by either side.*

The learned counsel for the Singer Company thought so little of the merits of this contention that they did not mention it in their argument. It is true that at the trial below they produced evidence as to the mounting of shafts in saw-mills, lathes, and steam engines; but it is equally true that very little, if any, reliance was placed upon such evidence, it apparently being their opinion that the devices mentioned were too remote from a sewing machine to constitute a basis for an application of the doctrine of double use. The matter was not adverted to by them in the oral

argument on the trial before the jury, nor upon the argument before the Court of Appeals, nor upon the argument in this Court either oral or printed. Such being the case, we were justified in refraining from arguing the point ourselves, as it was impossible for us to suspect that the Court would seize upon this abandoned point and base its decision thereon. In other words, we have not only been misled, but we have been taken by surprise, and we request an opportunity to argue this proposition of law before the full bench. When a case is decided upon a point not raised or argued, we think it nothing more than just, on application for a re-hearing that the defeated party be given an opportunity to argue that point fully before the Court. *On this particular point we have never been heard.* It may be that if we had been heard, our views would have been of no avail; but, nevertheless, it is the right of every litigant to be heard before judgment is pronounced against him; and in asking for a re-hearing on this point we respectfully submit that we are asking for nothing more than what every litigant, however humble he may be, is entitled to.

2. *The question was one not open to review in this Court.*

Addressing ourselves now to the precise point in hand we venture to make a few remarks thereon. We claim that the first answer to the contention of the Court regarding this question of double use is

that the matter was purely a question of fact for the jury and not a question of law for the Court, and consequently, the decision of the jury thereon is not reviewable on writ of error.

We are perfectly well aware that in several instances, notably in the case of *Pierce* vs. *Mulford*, 102 U. S., 112, this Court has stated that all improvement is not invention, and that to entitle an improvement to protection by a patent it must be the product of the inventive faculty as distinguished from mechanical skill. We note also the further fact that the Courts have held that the term "inventive faculty" is not susceptible of exact definition, and we note that the meaning of this term, so far as the decisions are concerned, is left in profound obscurity.

No two persons can agree as to the exact line of demarcation between invention and mechanical skill, because from variations in the characters of minds and differences in training and experience, a change which to one mind appears to have involved invention is thought by another, after the event, to have involved only mechanical skill. Consequently, to test the existence of invention by the assumption of the exercise of mental faculties by which it has been produced and which are indefinable, amounts simply to an attempted determination of a truth by mere judicial opinion, with no reliance upon evidence and without recourse to those salutary rules established from time immemorial by which and by which alone

a just conclusion can be reached. In other words, to determine the fact of invention or no invention by mere judicial caprice, is an act of tyranny, because such question, being one of fact, can be determined by the rules of evidence just as any other fact can be determined.

To a mind skilled in scientific reasoning the procedure of determining the nature of an effect by the assumption of a cause by which it may or may not have been produced, is contrary to the rules of logic obtainable in all other cases, and therefore, must be contrary to the correct rule in patent cases. The faculties of the mind are forces, and, as with other forces, we know nothing of them except by their effects. We know nothing of the real nature of the forces of electricity and heat. It is true that we have hypotheses that electricity is a fluid of some mysterious kind and that heat is a mode of motion; but these are nothing more that hypotheses which suit the present conditions of human knowledge. On the other hand, we know that when a certain effect is produced, the action or presence of the agency, whether electricity or heat or some other impalpable force, is to be inferred. Now this is the same with the impalpable forces of the human mind, such as those we call the inventive faculty and the constructive faculty. Their action is to be inferred from the effects produced, and we should determine whether one or the other has acted in a given case by the nature of the

effect, instead of attempting to classify the effects as inventions or as mere skillful constructions falling short of invention, by the assumption that in some cases the inventive faculty has been exercised, while in others only the constructive faculty has acted—an assumption which is incapable of proof in every case and is a matter of mere opinion.

Mr. Robinson says in his work on patents (1 Rob., 114), that "an invention is an unchangeable fact to which the law must conform." If this be true, then that fact, like any other fact, must be susceptible of proof by evidence, and should not be determined by the mere opinion of the Court before whom the question of invention is tried.

We contend, without fear of successful contradiction, that in patent cases the question of invention or no invention is purely a question of fact, and consequently, must be decided by the jury upon the evidence produced *pro* and *con*.

Mr. Walker, a standard text-writer, says at Sec. 42 of his work on patents:

"The question of invention is a question of fact and not of law."

He cites several *nisi prius* decisions which sustain him in the statement.

The best expression of the rule we have been able to find is that made by Mr. Justice Clifford in the opinion rendered by him in *Simpson* vs. *Woodman*, 10 Wall., 125, where he says:

"Patented inventions which are not new and use-
"ful, or which did not require any invention as com-
"pared with what existed, and was in use before,
"may doubtless be held invalid on that account, but
"the question whether a particular invention is new
"and useful, or whether it did require any invention
"to produce it, as compared with what existed be-
"fore, *are everywhere admitted to be questions of*
"*fact for the jury,* and certainly no such question is
"open here for the determination of this Court under
"this bill of exceptions."

It is true that this was said in a dissenting opinion, but it was not on that point that the original opinion was based, and in view of that fact, as well as the fact that Mr. Justice Clifford was one of the most eminent expounders of patent law that ever sat on any bench, we think we are justified in asuming that his statement of the law on this point was correct. He cites several decisions, and also a text-book to sustain him, and upon reference thereto we find that the citations are apt.

We are perfectly free to admit that where a patent is void on its face as being entirely destitute of the inventive faculty, it has been held that the Court may declare it void for that reason. That is to say, the patent itself furnished the evidence on which to base the conclusion of invalidity. Such a patent was involved in *Brown* vs. *Piper,* 91 U. S., 97, another in *Fond Du Lac County* vs. *May,* 137 U. S., 396, and

several other instances might be cited. Such a rule is in accord with our contention, for it will be observed that in all such cases the fact of no invention was determined by evidence, and that evidence was furnished by the patent itself instead of being extrinsic to the patent.

But in the case at bar we find a different state of facts. Cramer's patent does not furnish on its face any evidence of invalidity for want of invention or any other cause. *It was necessary to produce extrinsic evidence to show the prior existence of rotating and revolving shafts mounted in rigid bearings in saw-mills, machine lathes, and high speed engines.* Witnesses were called to testify to those facts, and then experts were called who testified as to the effect of those facts, all of which evidence was properly submitted to the jury for its determination. According to the rule of law announced by the opinion in this case, after this evidence had been introduced at the trial below, it was the duty of the trial judge to have decided judicially that the existence of those facts had been proven and their effect was to preclude the existence of invention in Cramer, and consequently to have instructed the jury to find his patent void for that reason. In other words, the opinion holds that the trial judge should have taken away from the jury a consideration of those questions of fact and decided them himself, thereby depriving us of a

right to a jury trial. Beyond all doubt it was the province of the jury to pass upon those facts regarding saw-mills, lathes, and steam engines, to determine whether or not the evidence of their existence was sufficient, whether the witnesses were telling the truth, and whether or not, assuming that the witnesses did tell the truth, those prior devices related to arts which were sufficiently near and analogous to the sewing machine art to justify them in holding that the use of a similar device in a sewing machine was nothing more than a double use. Those matters were submitted to the jury and the jury held that in their judgment saw-mills, lathes, and steam engines were too remote and too far removed from the sewing machine art to constitute analogous devices. Did not the jury have a right to do this under the Constitution and the laws of the land? Was it not a proper exercise of the functions of the jury, and was not Cramer entitled as a matter of right to the exercise of such functions? If an affirmative answer be proper to these queries, then does it not follow as an irresistible conclusion that upon a writ of error these matters of fact are not reviewable by this Court? The matter so appears to us. At any rate, we claim the right to argue this question *in extenso* before the Court, inasmuch as it never has been argued by counsel on either side, and inasmuch as our excuse for not arguing it heretofore is that it was not relied on nor argued by counsel for the Singer Company.

3. *But even if this question of invention or no invention were open for consideration, it appears to us that the decision in this case is erroneous.*

We recognize the general rule of law that it is no invention to apply an old contrivance to a new use. This is technically called "double use." The doctrine was first announced by Lord Abinger in *Losh* vs. *Hague*, 1 Webs. Pat. Cas., 202, where it is said:

"But it would be a very extraordinary thing to "think that because mankind has been accustomed to "eat soup with a spoon, a man might take out a pat- "ent because he says you might eat peas with a "spoon."

Judge Story mentions several striking instances in *Bean* vs. *Smallwood*, 2 Robb., 133, where he says:

"A coffee-mill applied for the first time to grind "oats, or corn, or mustard, would not give a title to "a patent for the machine. A cotton-gin applied "without alteration to clean hemp, would not give a "title to a patent for the gin as new. A loom to "weave cotton yarn would not, if altered, become a "patentable machine as a new invention by first "applying it to weave woolen yarn. A steam "engine, if ordinarily applied to turn a grist-mill, "would not entitle a party to a patent to it, if it were "first applied by him to turn the main wheel of a cot- "ton factory."

And so, likewise, Judge Blatchford, in the case of *Strong* vs. *Noble*, 3 Fifh., 586, when speaking of the

application of old things to new uses, where no invention was involved, says:

"Such applications are of this character—using an "umbrella to ward off the rays of the sun, it having "been before used to keep off the rain; eating peas "with a spoon, it having been before used to eat soup "with; cutting bread with a knife, it having been "before used to cut meat with."

Such instances are plainly cases of double use, but the law is well settled that the application of an old contrivance to a new use may amount to invention where the new use is not so cognate or analagous to the old as to follow therefrom as a matter of obvious reasoning. Where there is no logical connection between the two, but on the contrary a "logical chasm," and the mind must leap across that chasm in order to arrive at the new use, in such case the result is reached by what Mr. Justice Mathews has styled, in *Hollister* vs. *Benedict,* the inventor's "happy flash of thought," and is, therefore, patentable. In such cases the invention consists in the conception and selection of the new use and nothing else. Or, to put it in another way, where the new use is not analagous to the old, but is in a distant and dissimilar art, then the application of the old contrivance to the new use is patentable.

Thus in *Railroad Co.* vs. *Truck Co.*, 110 U. S., 490, this Court, through Mr. Justice Gray, held that

it was no invention to apply to a locomotive a certain form of truck which had already been applied to railway cars.

And so, likewise, in *Brown* vs. *Piper*, 91 U. S., 37, it was held by this Court, through Mr. Justice Swayne, that it was no invention to apply to the preservation of fish an old process which had been used by undertakers to preserve human corpses.

On the other hand, in *Mowry* vs. *Whitney*, 14 Wall., 620, it was held by this Court, in an opinion delivered by Mr. Justice Strong, that a process for annealing cast-iron railroad wheels involved invention, although the same process had been theretofore applied to speculum metal, and other iron castings, but never to railroad car wheels.

The same ruling was made by Mr. Justice Tyndal in the English case of *Crane* vs. *Price*, 1 Webs. Pat. Cas., 277, where the invention consisted solely in the use of a hot air blast with anthracite coal in the smelting of iron, notwithstanding the fact that a hot air blast had been previously used with bituminous coal in the smelting of iron.

The whole subject was considered by this Court in the case of *Potts* vs. *Creager*, 155 U. S. 606, wherein the opinion was rendered by Mr. Justice Brown. We quote therefrom as follows (the italics being ours):

"What then did the patentees do? They took the "cylinder shown in the Creager wood-polishing ex-

" hibit, removed the glass bars, and substituted bars
" of steel; provided it with an abutting surface in the
" form of a revolving roller, and used it for a totally
" distinct and different purpose. Putting aside, for
" the purposes of this discussion, the fact that the
" Creager cylinder was an abandoned experiment,
" did this involve invention? Certainly, if this ex-
" hibit does not anticipate, none of the others do.
" The answer to this requires the consideration of
" the often recurring question, which has taxed the
" ingenuity of courts ever since the passage of the
" Patent Act, as to what invention really is. When
" a patented device is a mere improvement upon an
" existing machine, and the case is not complicated
" by other anticipating devices, the solution is ordi-
" narily free from difficulty. But where the al-
" leged novelty consists in transferring a device from
" one branch of industry to another, the answer de-
" pends upon a variety of considerations. In such
" cases we are bound to inquire into the remoteness
" of the relationship of the two industries; what al-
" terations were necessary to adapt the device to its
" new use, and what the value of such adaptation has
" been to the new industry. If the new use be ana-
" logous to the former one, the court will undoubted-
" ly be disposed to construe the patent more strictly,
" and to require clearer proof of the exercise of the
" inventive faculty in adapting it to the new use—
" particularly if the device be one of minor import-

" ance in its new field of usefulness. On the other " hand, if the transfer be to a branch of industry but " remotely allied to the other, and the effect of such " transfer has been to supersede other methods of do- " ing the same work, the court will look with a less " critical eye upon the means employed in making the transfer. Doubtless, a patentee is entitled to " every use of which his invention is susceptible, " whether such use be known or unknown to him; " but the person who has taken his device, and, by " improvements thereon, has adapted it to a different " industry, may also draw to himself the quality of " inventor. If, for instance, a person were to take a " coffee-mill and patent it as a mill for grinding " spices, the double use would be too manifest for se- " rious argument. So, too, this court has denied in- " vention to one who applied the principle of an ice- " cream freezer to the preservation of fish, *Brown* " vs. *Piper*, 91 U. S., 37; to another who changed the " proportions of a refrigerator in such manner as to " utilize the descending instead of the ascending cur- " rent of cold air, *Roberts* vs. *Ryer*, 91 U. S., 150; to " another who employed an old and well known " method of attaching car-trucks to the forward " truck of a locomotive engine, *Pennsylvania Rail-* " *road* vs. *Locomotive Truck Co.*, 110 U. S. 490; and " to still another who placed a dredging screw at the " stem instead of the stern of a steamboat, *Atlantic* " *Works* vs. *Brady*, 107 U. S., 192. In *Tucker* vs.

" *Spalding,* 13 Wall., 453, the patent covered the use " of movable teeth in saws and saw plates. A prior " patent exhibited cutters of the same general form " as the saw teeth of the other patent, attachable to a " circular disk, and removable as in the other, the " purpose of which patent was for the cutting of " tongues and grooves, mortises, etc. The court held " that if what it actually did was in its nature the " same as sawing, and its construction and action sug- " gested to the mind of an ordinarily skilled mechan- " ic this double use to which it could be adapted " without material change, then such adaption to a " new use was not a new invention, and was not " patentable.

" Upon the other hand, we have recently upheld a " patent to one who took a torsional spring, such as " had been previously used in clocks, doors, and " other articles of domestic furniture, and applied it " to telegraph instruments, the application being " shown to be wholly new. *Western Electric Co.* vs. " *La Rue,* 139 U. S., 601. So, also in *Crane* vs. *Price,* " Webster's Pat. Cas., 409, the use of anthracite coal " in smelting iron ore was held to be a good inven- " tion, inasmuch as it produced a better article of " iron at a less expense, although bituminous coal had " been previously used for the same purpose. See " also *Steiner* vs. *Heald,* 6 Exch., 607.

" Indeed it ofen requires as acute a perception of " the relation between cause and effect, and as much

" of the peculiar intuitive genius which is a charac-
" teristic of great inventors, to grasp the idea that a
" device used in one art may be made available in
" another, as would be necessary to create the device
" *de novo*. And this is not the less true if, after the
" thing has been done, it appears to the ordinary
" mind so simple as to excite wonder that it was not
" thought of before. The apparent simplicity of a
" new device often leads an inexperienced person to
" think that it would have occurred to any one famil-
" iar with the subject; but the decisive answer is that
" with dozens and perhaps hundreds of others labor-
" ing in the same field, it had never occurred to any
" one before. The practised eye of an ordinary
" mechanic may be safely trusted to see what ought
" to be apparent to every one. As was said by Mr.
" Justice Bradley, in *Loom Company* vs. *Higgins*,
" 105 U. S., 580, 591: 'Now that it has succeeded,
" 'it may seem very plain to any one that he could
" 'have done it as well. This is often the case with in-
" 'ventions of the greatest merit. It may be laid
" 'down as a general rule, though perhaps not an in-
" 'variable one, that if a new combination and ar-
" 'rangement of known elements produce a new and
" 'beneficial result never attained before, it is evi-
" 'dence of invention.'

" As a result of the authorities upon this subject, it
" may be said that, if the new use be so nearly anal-
" ogous to the former one, that the applicability of

" the device to its new use would occur to a person of " ordinary mechanical skill, it is only a case of " double use, but if the relations between them be re- " mote, and especially if the use of the old device " produce a new result, it *may* at least involve an ex- " ercise of the inventive faculty. Much, however, " must still depend upon the nature of the changes " required to adapt the device to its new use."

In view of the law as announced in this last cited case, we respectfully submit that the mounting of a treadle in the solid casting of a sewing machine was not an analogous use to the mounting of revolving and oscillating shafts in saw arbors, machine lathes, and high speed engines. In other words, a sewing machine is not analogous to a saw mill, a machine lathe, or a steam engine, and these devices are too remote and distant to furnish the basis for a conclusion of law that the use of any particular device in them would naturally and spontaneously suggest itself to the mind of a person building a sewing machine. For more than half a century treadles had been mounted in sewing machines in various and sundry ways, but never until Cramer appeared had they been mounted in the vertical brace, and this, too, notwithstanding the palpable fact that the old methods of mounting were bad and produced a rattling noise and much lost motion. Saw-mills, machine lathes, and high speed engines were known to the various experts in the sewing machine art, and yet none of

them ever conceived the idea of mounting the treadle of his sewing machine in an analogous way. If it was a matter of such obvious reasoning, and one which readily recommended itself to the mind of a mechanic, as the opinion of this court makes it out to be, why is it that it was never done until 1880 by Cramer after the primary patents on sewing machines had expired and that colossal fortune had been made in the sewing machine art which transformed Mr. Singer from a pauper mechanic into a merchant prince? The very simplicity of the contrivance ought to be its chief merit, and yet that feature of it is used for our undoing. In this connection we venture to call this court's attention to the impressive language used by Mr. Justice Brown in the case of *Dubois* vs. *Kirk*, 158 U. S., 63:

"The Kirk invention is undoubtedly a very simple "one, and it may seem strange that a similar method "of relieving the pressure had never occurred to the "builders of bear-trap dams before; but the fact is "that it did not, and that it was not one of those obvi- "ous improvements upon what had gone before, "which would suggest itself to an ordinary work- "man, or fall within the definition of mere mechan- "ical skill. It was in fact the application of an old "device to meet a novel exigency and to subserve a "new purpose. That it is a useful improvement can "scarcely be doubted."

Also to the language of Mr. Justice Clifford in *Loom Co.* vs. *Higgins,* 105 U. S., 591, where Webster's celebrated loom patent was attacked on the ground that it was void for want of invention. The learned Justice said:

"This argument would be sound if the combination claimed by Webster was an obvious one for attaining the advantage proposed—one which would occur to any mechanic skilled in the art. But it is plain from the evidence and from the very fact that it was not sooner adopted and used, that it did not for years occur in this light to even the most skillful persons. It may have been under their very eyes, they may almost be said to have stumbled over it; but they certainly failed to see it, to estimate its value and to bring it into notice. Now that it has succeeded, it may seem very plain to any one that he could have done it as well. This is often the case with inventions of the greatest merit. It may be laid down as a general rule, though perhaps not an invariable one, that if a new combination and arrangement of known elements produces a new and beneficial result never attained before, it is evidence of invention."

This language was quoted by Mr. Justice Brown with approval in the case of the *Barbed Wire Patent,* 143, U. S., 283.

In conclusion we submit that the conception or idea of mounting the treadle of a sewing machine in

the vertical double brace was not a mere double use, and that it did amount to invention. If that is true, then the Cramer claim is entitled to a broad construction, and the conclusion reached in the opinion of this court will necessarily fall. The whole contention is as to the scope of Cramer's actual invention. Undoubtedly the broad feature of it is the mounting of the treadle in the brace. This broad idea the opinion says did not involve invention. We have undertaken to show that it did involve invention, and if we are correct in that contention, then the opinion must be wrong. In other words, we submit that there are two fundamental errors in the opinion, viz: (1) *The holding that the question of infringement was one of law and not of fact;* (2) *The holding that the broad idea of locating the treadle in the brace did not involve invention.* These are the two premises from which the conclusion of the opinion is deduced, and we freely admit that if these premises are logical and sound, then the conclusion is correct. But we earnestly contend with all the force we possess, that these two premises are not sound, and consequently, that the conclusion drawn therefrom is erroneous. For which reason we ask for a reargument of this case so that it may be carefully considered in the light of the decisions of this court hereinabove cited and of the arguments hereinabove advanced.

Another thought is pertinent in this connection, and that is the moral aspect of the case. Is it possible that this court paid no attention to the moral aspect of this case—has viewed with unconcern the conduct of the Singer Company in their adoption of the device in question?

The record shows that immediately after the granting of his patent Cramer wrote to the Singer Company informing them thereof and calling their attention to the advantage of mounting the treadle in the brace. They replied to him, practically, by stating that they saw no merit in it and did not care to use such a device. And yet within a few months thereafter we find them adopting the device of mounting the treadle in the brace, varying only in details of construction from the form shown in the Cramer patent. There is no question that they first got the idea of mounting the treadle in the brace from Cramer, and it is equally apparent that they used that idea with only slight variations in details of construction, with the intent and purpose of evading the payment of any tribute to the Cramer patent. This is but another instance of the greed of a rich and powerful corporation seeking to get the benefit of a patentee's genius without paying therefor. This is what we mean by the moral aspect of the case. While we do not mean to be understood as contending that Cramer should receive compensation if he has no just claim, we do mean to say that after a litigation of

ten years and seven different hearings and the adjudication of the validity of his patent by a jury, affirmed by a court of appeals, if it be that the questions before this court are doubtful ones, then the moral aspect of the case ought to be sufficient to induce the court to give the benefit of the doubt to the patentee. According to the Constitution, patents are grantable for the purpose of promoting the progress of science and the useful arts, and as a means towards attaining that end the true rule of law is to give the benefit of every doubt to the patentee and not by refinements of reasoning and strained construction to whittle away his invention and thereby enable others to take the substance of it without infringing the patent.

Nor do we fail to note the fact that the Singer Company, while perfectly willing to infringe upon the rights of others, are swift to resent any invasion of their own rights. In the two cases of *Singer Manufacturing Company* vs. *June Manufacturing Company*, and *Singer Manufacturing Company* vs. *Bent*, 163 U. S., 169, and 205, in which cases the opinions were rendered by Mr. Justice White, we find that the Singer Company was awarded injunctions, together with decrees for accountings of enormous profits against two of its rivals, who had infringed upon the rights of the Singer Company by the use of the word "Singer" as applied to these same identical machines involved in the case at bar and charged by us to be an infringement of the Cramer patent. This

court had no hesitancy in awarding to the Singer Company the relief to which it was entitled in respect of its Diehl machines, and yet those same machines practically owe their life and existence to the valuable and fundamental idea which Mr. Cramer communicated to the Singer Company by the letters appearing in this record. These are not idle assertions, for to any one of a mechanical turn, the fact must be apparent that the fundamental idea of the Diehl machine, and the one which more than all others contributes to its merit and utility, is the broad idea of mounting the treadle in the vertical base, an idea which none of the Singer Company's skilled mechanics seem ever to have dreamed of until Mr. Cramer communicated it to them.

Again, we fear that the magnitude of this case disturbed the equanimity of the court and acted to our prejudice. The Singer Company advertises that they have sold several millions of machines embodying the Diehl construction. The jury in this case fixed as a royalty for Cramer one dollar for each machine. This particular case is a test case, and if the judgment had been affirmed, the Singer Company would have had to account to us for the royalty on several million machines. This fact was adverted to by the counsel for the Singer Company in his printed brief in this court on his application for a writ of *certiorari*, and if he was justified in referring to it, we claim an equal right to do so on this petition

for a rehearing. We sincerely trust that the magnitude of the issue had no influence with the court. At the same time we cannot refrain from opining that if the only issue involved had been the verdict of $12,450, rendered by the jury, we might possibly have had a better chance of securing an affirmance of the judgment.

III.

Another reason occurs to us as justifying the request for a rehearing, and it is this: At the argument of this case only seven justices were present, the other two being absent on account of illness. Since the argument and submission of the case an additional justice has been appointed, but inasmuch as he did not hear the argument, he probably did not participate in the decision. Consequently, this leaves only six justices to participate in the decision. In a case of this magnitude, involving issues of such vital interest, we submit that we are entitled to a hearing by the full bench. Such a hearing we have not had. We have had only six members of the bench to hear the argument and participate in the decision.

It is not our custom, as it is with that of some practitioners, to condemn every decision merely because it is adverse to our interests. We flatter ourselves that our mind is sufficiently free of partisanship to enable us to recognize and appreciate the correctness

of a decision even when adverse to our interests. For this reason we seldom apply for rehearings in any court and can recall only a few instances thereof in our practice. In the present case we feel constrained to deviate from that practice because we feel deeply aggrieved by the decision and think that we have been too harshly treated. It appears to us that by some unaccountable oversight the court has fallen into a most grievous error, which ought to be corrected. In our judgment the decision in this case establishes a new rule in patent law irreconcilably at war with all the prior adjudications of this court on the subject, and that, too, without a hearing or argument on the point from either counsel in the case.

We understand the rule as to rehearings to be the same now as when announced by Chief Justice Taney in 1852 (*Brown* vs. *Aspden*, 14 How. 27), viz., that where a member of the court who concurred in the judgment desires a reargument, the same will be ordered. Under this rule we earnestly appeal to all the members of the court who concurred in this judgment, hoping that of the number there may be found one who will consider the matter of sufficient gravity to justify him in requesting a re-argument.

Respectfully submitted,

JOHN H. MILLER,
Counsel for Respondent.

San Francisco, Feb. 15, 1904.

CERTIFICATE.

I, JOHN H. MILLER, counsel for Herman Cramer, Respondent in the foregoing case, hereby certify that in my opinion the foregoing petition for a rehearing is well founded in point of law and ought to be granted.

JOHN H. MILLER.

Supreme Court of the United States.

No. 18.—October Term, 1903.

The Singer Manufacturing Company, Petitioner, vs. Herman Cramer. } On writ of certiorari to the United States Circuit Court of Appeals for the Ninth Circuit.

[February 1, 1904.]

This controversy relates to an alleged infringement by the petitioner, a New Jersey corporation, of United States letters patent No. 271,426, issued to the respondent on January 30, 1883, for "a new and improved sewing machine treadle." For convenience the petitioner will be hereafter referred to as the Singer Company and the respondent as Cramer.

The treadle device used by the Singer Company on its sewing machines, which it was charged infringed the Cramer patent, was covered by letters patent No. 306,469, dated October 14, 1884, issued to the Singer Company as the assignee of one Diehl.

The file wrapper and contents exhibit the following proceedings in the Patent Office respecting the Cramer patent. The original application was filed on May 25, 1882, and was for the grant of letters patent to Cramer "as the inventor, for the invention set forth in the annexed specification." The specification and oath thereto read as follows:

"I, Herman Cramer, of the city of Sonora, in Tuolumne County, in the State of California, have invented certain improvements in a treadle, to be used in sewing machines, or other machinery where a noiseless treadle may be required, of which the following is a specification:

"My invention consists of the usual platform marked 'A' in Fig. 1 of diagram on treadle bar. The ends of said treadle bar, marked 'B,' are shaped like the letter V and rest in socket in lower end of a brace 'C,' the socket being ♥ shaped, the brace 'C' cast in one piece, and the treadle bar and platform on the bar is also cast in one piece.

"The treadle bar rests in socket in brace 'C,' which is immediately above a cross-brace usually in machines to keep them from spreading apart, the nut on end of cross brace is marked 'D.' Letter 'M' immediately beneath cross brace and treadle bar is an oil receiver to retain any drippings of oil from the bearings of treadle bar.

"My invention consists in having the ends of the treadle bar V-shaped to fit in hole in brace 'C,' also ♥ shaped to receive the ends of the treadle bar.

"This V-shaped treadle bar in brace 'C' entirely prevents noise from the treadle, is self-adjusting, and does away with the necessity of cones and set screws now in use. This I claim as my invention. Fig. 1 represents

platform 'A' and treadle bar, the ends of which are V-shaped and marked 'B.'

"Fig. 2 represents the lower end of brace 'C' with hole shaped to receive the ends of treadle bar 'B.' 'D' represents nut on end of cross brace immediately below treadle bar.

STATE OF CALIFORNIA, }
County of Tuolumne. }

"Herman Cramer, the above-named petitioner, being duly sworn, deposes and says that he verily believes himself to be the original and first inventor of the improvement in a noiseless self-adjusting treadle described in the foregoing specification, that he does not know and does not believe that the same was ever before known or used, and that he is a citizen of the United States."

The application was referred to the examiner, who, on May 29, 1882, wrote to Cramer, in care of his attorneys, as follows:

"The application is not prepared in conformity with the rules of the office. The specification is written on both sides of the pages, while the rules direct that it should be written on one side of each page only.

"No claim is appended to the specification. The oath is incomplete, as section 39 of the rules requires applicants to state under the oath if the invention has been patented to them, or with their knowledge and consent to others in any foreign country, and if so, the number, date and place of such patent or patents. Reference is made to the patent to G. W. Gregory, No. 256,563, April 18, 1882, which exhibits the alleged invention."

On August 3, 1882, the following substitute specification, concluding with an oath similar to that appended to the prior specification, was sent to the Patent Office:

"I, Herman Cramer, of the city of Sonora, in Tuolumne County, in the State of California, have invented certain improvements in a treadle and brace, to be used in sewing machines or other machinery where a noiseless treadle may be required, of which the following is a specification:

"My invention consists in a combination of the usual platform marked 'A,' in Fig. 1 of diagram on treadle bar. The ends of said treadle bar marked 'B' are to bear against mufflers.

"The treadle bar bearings are in and on brace 'C.' The treadle bar rests in socket in brace 'C,' which is immediately above a cross bar usually in machines to keep them from spreading apart.

"The nut on end of cross bar, is marked 'D.' Letter 'M,' immediately beneath cross bar, and treadle bar, is an oil receiver to retain any drippings of oil from the bearings of treadle bar.

"The treadle bar, mufflers and brace 'C' are held between the right and left legs of the machine by means of a brace bar underneath the treadle bar.

"This brace and socket or bearing in or on brace is in one piece.

"The treadle bar with mufflers on the ends, working or bearing in or on brace, entirely prevents noise from the treadle, is self-adjusting, and does away with the necessity for cones and set screws now in use.

"Fig. 1 represents platform 'A' and treadle bar, the ends of which may be V-shaped, or any shape to suit, marked 'B.'

"Fig. 2 represents the lower end of brace 'C.'

"'D' represents nut on end of cross bar immediately below the treadle bar.

"What I claim is a combination of brace 'C' with socket or bearing in it or on it, to receive the treadle bar with the mufflers at the ends of treadle bar or in or on brace 'C' in connection with said brace 'C,' and the treadle bar in connectiyn with brace 'C' and mufflers to work in or on brace 'C,' substantially as set forth."

On August 14, 1882, the examiner wrote Cramer, in care of his attorneys, as follows:

"Applicant's amended claims are met by the patent to J. E. Donovan, June 28, 1881, No. 243,529, in view of which a patent is again refused."

Following this rejection there was filed a revocation of the power of attorney which had been executed by Cramer in favor of the attorneys who had theretofore conducted the proceedings, and an appointment of other attorneys for the further prosecution of the application. On October 17, 1882, the substituted attorneys sent to the Patent Office a new drawing and an amendment of the specification on file, which amendment consisted in cancelling all the specification except the signature and substituting for the matter so stricken out the following:

"Be it known that I, Herman Cramer, of Sonora, in the county of Tuolumne and State of California, have invented a new and improved sewing machine treadle; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification.

"My invention relates to improvements in the bearings of sewingmachine treadles, and it has for its object to provide means, first, to keep the treadle bearings rigidly in line and at a fixed distance apart to avoid friction, and second, to make its movement in use, noiseless. To this end my invention consists in the construction and combination of parts hereinafter fully described and claimed, reference being had to the accompanying drawings in which—

"Fig. 1 is a perspective view of a portion of a sewing machine showing my invention.

"Fig. 2 is a transverse vertical section through one bearing of the treadle.

"A represents the treadle provided with the usual pitman connection by which to run the sewing machine wheel. B represents the two trunnions cast as a portion of the treadle and extending from its sides into loopholes in the common cast iron cross brace C. These trunnions are sharpened to an edge or corner along their lower sides, and the lower end of the loophole is hollowed to an angle more obtuse than the edge of the trunnion, to serve as a bearing for the same and permit the rocking motion common to treadles

"C represents the usual cast iron double brace connecting the two end legs dia gonally in a plane generally vertical. The lowerends of this brace are secured directly to the web of the legs by bolts *d*, and for convenience and strength I make the two ends of the common cross bar D serve as

these bolts. The upper ends of the brace are secured as usual, either to the web of the egs or to the table of the machine near the legs.

"The treadle and its trunnion bearings are wholly independent of the cross bar D, except its service as stated, to hold the brace to the legs. The bearing holes in the brace are formed into long vertical loops to permit the entrance of the treadle.

"Pieces of leather F, or other soft material, cover the top and end of each trunnion to serve as cushions to keep the same close in its bearing, to prevent the noise which would result were the trunnions permitted to bounce and thump endways, when the treadle is in motion. The leather F is fitted to the curve of the upper side of the trunnion, which is an arc of a cylinder, whose center of oscillation is the lower edge of the trunnion; the same leather also interposes between the end of the trunnion and the adjacent iron. *f* is a block serving as a mere backer to which the cushion F is attached. This block conforms to the back and top side of the cushion and fills the loophole in the brace above the trunnion. It also has tangs or projections *e*, resting in suitable recesses in the brace C, which are held between the brace and the web of the leg E, by which means the block and cushion are held in place. Below the bearings of the trunnions B I provide cups, M, attached to the ends of brace C, to catch the oil that usually drips from such bearings.

"By this construction my treadle bearings are rigidly fixed and in no way liable to get out of line or to require adjustment; the usual noise is prevented, and overflowing of oil is caught before it can do damage.

"I am aware that sewing machine treadles have before been provided with V-shaped bearings and I do not claim the same as my invention but—

"What I claim and wish to secure by letters patent is—

"1. The vertical double brace joining the legs of the two ends of a sewing machine, provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings, substantially as specified.

"2. The sewing machine legs E, the vertical double brace C secured thereto and provided with holes to serve as bearings for the treadle A, and the treadle provided with trunnions B to oscillate in said bearings, in combination with the cushion F and the block *f*, as and for the purpose specified."

Accompanying the new specification was the following communication, signed by the attorney:

"A new oath is herewith filed. Gregory, referred to, pivots the grooved trunnions of his treadle upon knife edges secured within the upper loops of two collars, which are secured to the cross bar by means of set screws to keep them from turning. Donovan pivots his treadle upon its trunnions having sharpened edges, in grooves in the cross bar, where it is held by collars provided with flanges projecting over the trunnions. Applicant pivots his treadle upon the sharpened edges of its trunnions in loop holes in the two ends of the brace which is bolted to the legs of the machine by the two ends of the cross bar. This service of the cross bar might be as well performed by two short bolts; but the bar being a usual cross tie to stiffen the legs, applicant uses its ends as bolts so hold his brace ends to the legs. We have rewritten the specification to elucidate the inventor's claim.

Should the case meet with favorable consideration a new drawing will be furnished. For the purpose of examination see pencil sketch on sheet of drawing filed."

On October 19, 1882, the examiner wrote Cramer, in care of his attorneys, as follows:

"The case has been reconsidered in connection with the substituted specification filed the 17th inst., and the examiner holds that the references previously cited—that of Gregory in particular—meets the alleged invention. The case is accordingly rejected."

To this letter the following reply was made by the attorneys for Cramer:

"The examiner will please notice that applicant's invention places both bearings of the treadle in the cross brace.

"By this means they may be made perfectly true in line either by casting or drilling and they cannot be thrown out of line either by use or by the most awkward setting up.

"Therefore one source of friction is avoided. All the references have shown bearings made of two separate pieces which could readily be set up out of line or even be worked loose. The advantage is obvious.

A reconsideration is respectfully asked."

This closed the correspondence. Soon afterwards notification was given that the patent had been allowed, and letters patent embodying the specification last above set forth, headed "Treadle for sewing machines," &c., were issued, bearing date January 30, 1883. The following is a *fac simile* of the drawing referred to in the specification:

Fig 1.

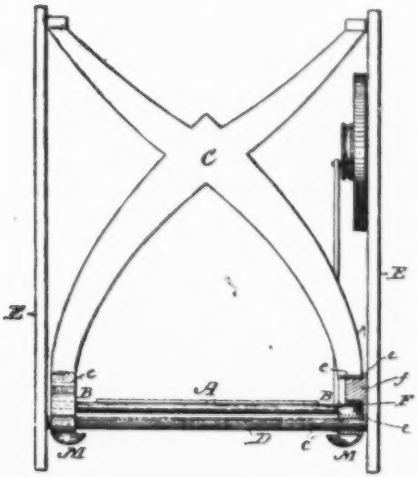
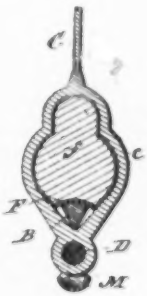


Fig 2.



The alleged infringing device is delineated on the following *fac simile* of the first sheet of the drawing attached to the Diehl patent:

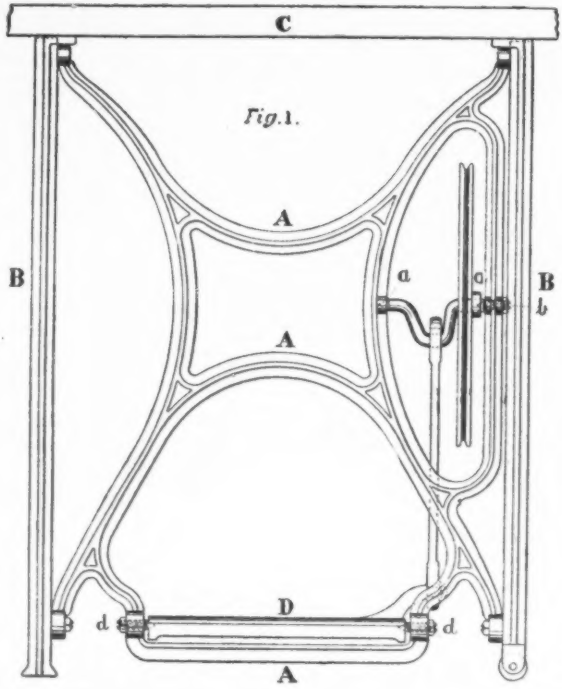


Fig. 1.

In this specification Diehl declared his invention to consist in "certain new and useful improvements in sewing machine stands and treadles;" and the object to be "to secure a permanent and reliable support and adjustment for both the band wheel and treadle and to preserve their respective relative positions, so that they will always co-operate to produce the best results with the least danger of friction or binding." The claims were five in number, as follows:

"1. In a sewing machine stand, a cross brace having supports for both the band wheel and the treadle integral with said brace.

"2. In a sewing machine stand, a cross brace having supports for both the band wheel and the treadle integral with said brace, and provided also with means for adjusting and taking up the wear of such band wheel and treadle.

"3. In a sewing machine stand, a cross brace adapted to connect the legs or side pieces thereof, provided at one side with bearings for the fly wheel crank shaft, and having a support at its base for the treadle, substantially as set forth.

"4. The combination, with the cross brace of a sewing machine stand, of a crank shaft and a treadle, both mounted in the said brace, substantially as set forth.

"5. A cross brace for sewing machine stands, having at its base a cross bar, combined with a treadle mounted in said cross bar, substantially as set forth."

To recover damages for alleged infringement of the first claim of the Cramer patent, in the use by the Singer Company of the Diehl device just referred to, Cramer brought this action at law against the Singer Company on October 8, 1896, in the Circuit Court of the United States for the Northern District of California. By amendment of the declaration the recovery was limited to damages sustained by infringements committed within the Northern District of California. In the answer filed on behalf of the Singer Company—in addition to excepting to the jurisdiction of the court and pleading as *res judicata* a former judgment rendered in favor of the defendant in an action brought by Cramer against one Fry, an employee of the Singer Company (68 Fed. Rep. 201)—defenses were interposed of want of novelty and utility and lack of invention, and infringement was denied.

A trial was had which resulted (by direction of the court, sustaining the plea of *res judicata*) in a verdict and judgment for the defendant. This judgment was reversed by the Circuit Court of Appeals for the Ninth Circuit. (93 Fed. Rep. 636.) On a second trial a verdict was rendered for Cramer and judgment was entered thereon for the sum of $12,456. On appeal this judgment was affirmed by the Circuit Court of Appeals for the Ninth Circuit. (109 Fed. Rep. 652.) A writ of certiorari was thereafter allowed by this court.

Mr. Justice WHITE, after making the foregoing statement delivered the opinion of the Court.

Sixty-eight exceptions were taken by the Singer Company during the trial of the action in the Circuit Court and were pressed upon the attention of the Circuit Court of Appeals in sixty-nine assignments of error. These exceptions were all in effect relied upon in the argument at bar; but from the view we take of the case it is unnecessary to consider and decide any other assignment than that based upon the exception to the refusal of the court, at the close of all the evidence, to instruct a verdict for the defendant on the ground that "no infringement whatever had been shown." As in each of the patents in question it is apparent from the face of the instrument that extrinsic evidence is not needed to explain terms of art therein, or to apply the descriptions to the subject matter, and as we are able from mere comparison to comprehend what are the inventions described in each patent and from such comparison to determine whether or not the Diehl device is an infringe-

ment upon that of Cramer, the question of infringement or no infringement is one of law and susceptible of determination on this writ of error. (*Heald* v. *Rice*, 104 U. S. 737; *Market Street Cable R. Co.* v. *Rowley*, 155 U. S. 621, 625.)

Whether error was committed in refusing to direct a verdict, is then the question to be decided. The claims of the Cramer patent are two in number, and read as follows:

"1. The vertical double brace joining the legs of the two ends of a sewing machine, provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings, substantially as specified.

"2. The sewing machine legs E, the vertical double brace C secured thereto and provided with holes to serve as bearings for the treadle A and the treadle provided with trunnions B to oscillate in said bearings, in combination with the cushion F and the block *f*, as and for the purpose specified."

Infringement is charged only in respect to the first claim. In substance the contention for Cramer is that the conception or idea of the practicability and desirability of utilising a vertical double brace as a support for a sewing machine treadle was new with Cramer, and the combination devised by him produced such new and useful results and exhibited such an exercise of the inventive faculty as to cause the patent to be a pioneer, and, therefore, entitle the patentee to demand that the claim of the patent should be broadly and liberally construed. For the Singer Company it is contended that the availability of use of a vertical cross brace as a support for a sewing machine treadle was apparent to any person possessing ordinary mechanical skill, that the invention in question if patentable was in no just sense one of a primary nature, and that the combination described by Cramer is to be restricted narrowly to the mere details of the mechanism described as constituting the combination. We must first determine which of these contentions is correct.

Discussing the significance of the term 'pioneer' as applied to a patented invention, this court, in *Westinghouse* v. *Boyden Power Brake Co.*, (170 U. S. 537,) said (p. 561):

"To what liberality of construction these claims are entitled depends to a certain extent upon the character of the invention, and whether it is what is termed in ordinary parlance a 'pioneer.' This word, although used somewhat loosely, is commonly understood to denote a patent covering a function never before performed, a wholly novel device, or one of such novelty and importance as to mark a distinct step in the progress of the art, as distinguished from a mere improvement or perfection of what had gone before. Most conspicuous examples of such patents are: The one to Howe of the sewing machine; to Morse of the electrical telegraph; and to Bell of the telephone. The record in this case would indicate that the same honorable appellation might be safely bestowed upon the origi-

nal air brake of Westinghouse, and, perhaps, also, upon his automatic brake. In view of the fact that the invention in this case was never put into successful operation, and was to a limited extent anticipated by the Boyden patent of 1883, it is perhaps an unwarrantable extension of the term to speak of it as a 'pioneer,' although the principle involved subsequently and through improvements upon this invention became one of great value to the public."

To ascertain whether the patented invention of Cramer is entitled to be embraced within the term pioneer as just defined, we will consider it in connection with the state of the art.

In the history of the art it is unquestioned that long prior to the application by Cramer for the grant of the patent in question, devices similar to the vertical cross brace C and the lower cross bar or tie rod D, shown in the drawing of the Cramer patent, were commonly employed in sewing machines. This is conceded by Cramer in statements made in the progress of his application through the Patent Office. Thus, in the specification which forms a part of the patent the vertical brace C is referred to (italics not in original) as "the *common* cast iron brace C," and "the *usual* cast iron double brace;" while in the first of the proposed specifications as well as in that which was finally adopted, the lower bar or tie rod D is referred to (italics not in original) as "the *common* cross brace or cross bar." And in both the first and second specifications the usual purpose subserved in sewing machines by this cross bar was "to keep them (the machines) from spreading apart." It is, of course, obvious that such was also the purpose of the employment of the vertical double or cross brace.

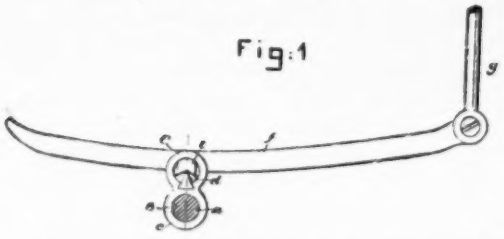
The vertical double cross brace C, as shown in the Cramer drawing, is a solid piece of casting. But it is also an undisputed fact that long prior to the alleged invention of Cramer it was a well-known method of construction when revolving or oscillating shafts were to be placed in bearings or supports, to have both bearings or supports of such shafts attached to a solid metal casting. Instances of such practices, testified to by witnesses, may be referred to. One was a device to hold a saw mandrel or saw arbor, the former being cast in one piece for the purpose of connecting both journals of the arbor to keep it in absolute line. Another device is the head stock of an ordinary engine lathe or machine lathe, where in order to have a proper working machine it is absolutely necessary that the shaft bearings shall be in exact alignment with each other and firmly in one place. Still another illustrative device employed for a great many years is embodied in a high speed engine. So, also, in the sewing machine art, as evidenced by the Wilcox patent No. 106,242 of date August 9, 1870, to be hereafter noticed, the legs of sewing machines had long before Cramer's application been used as bearings for treadle bars, the bearings being cored out of the leg castings.

A vertical cross brace and a lower cross brace or tie rod being common adjuncts of sewing machines at the time of Cramer's alleged invention, and it being also customary to support the lower cross rod or brace in the web of the legs of sewing machines and to utilize the legs as bearings, and it being old in machinery to employ solid castings as bearings or supports for oscillating shafts where a fixed alignment was essential, we readily conclude that there was no merit in the mere conception or idea that a vertical double brace was capable of being advantageously utilized as bearings for sewing machine treadles, and that the devising of means for so utilizing such a brace did not involve such an exercise of the inventive faculty as entitled Cramer to assert in himself a right to claim a patent broadly for the use in combination of a vertical double brace and a sewing machine treadle. In view of this and of the fact that the principal elements of the Cramer combination were old, we hold that the Cramer patent was not a primary one, and that it is not, therefore, entitled to receive the broad construction which has been claimed for it. Let us, therefore, examine the first claim of the patent in connection with the proceedings in the Patent Office anterior to the allowance of the patent, in order to fix its precise import, as a preliminary to considering whether, as correctly construed, it is infringed by the Singer appliance. The claim reads as follows:

"The vertical double brace joining the legs of the two ends of a sewing machine, provided with holes through its lower extremities to serve as bearings, in combination with a treadle provided with trunnions fitted to oscillate in said bearings, substantially as specified."

In the first specification sent to the Patent Office, the object sought to be attained is declared to be the elimination of the noise caused by the operation of a loose treadle, whether used in sewing machines or other machinery. The applicant evidently had in mind treadles which oscillated upon rigid bars and rested on cone bearings or analogous supports, attached to the rigid bars by set screws—such bearings needing adjustment from time to time as the friction of the parts from the operation of the treadle caused wear and looseness of the parts. It was recited that the treadle bar and the platform on such b[illegible] (*i. e.*, the foot rest) was to be cast as one piece. The invention was declared to consist "in having the ends of the treadle bar V-shaped to fit in hole in brace C, also heart shaped to receive the ends of the treadle bar."

The application based upon this first specification was rejected, as mentioned in the statement of facts, upon a reference to the patent to G. W. Gregory, No. 256,563, April 18, 1882, which the examiner stated exhibited "the alleged invention." Gregory termed his invention "An improvement in treadle supports for sewing machines." It is illustrated in the following *fac simile* of one of the figures of the drawing of the patent:



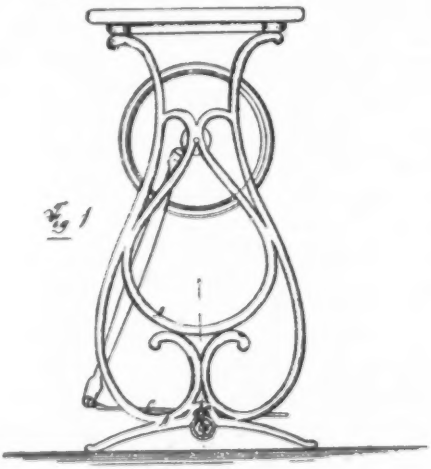
The invention consisted in attaching to the lower cross bar or rod of a sewing machine two devices styled collars, each collar having two circular openings, one above the other. The upper opening contained a V-shaped bearing. The cross bar was fitted into the lower opening. The treadle or foot rest was provided on each side with short projections termed ears, which fitted on the V-shaped bearings in the upper portion of each collar. The specification contained the following statement:

"I am aware that V-shaped or scale bearings are old in connection with the sewing machine treadles—as, for instance, a long rod to which the treadle is secured has been provided at its ends in the set frames of the machine stand with V-shaped bearings."

At the close of the descriptive portion of the specification it was further stated:

"I am aware that sewing machine treadles have had V-shaped bearings, as in United States patent Nos. 148,759 and 106,242; but neither of said ...nts show a bearing constructed in accordance with my invention."

...106,242 was a patent granted to C. H. Willcox on August 9, 1870. It covers the following device:



The device shows the character of treadle support now employed in the Willcox and Gibbs sewing machine. The stand is devoid of a vertical cross brace, the legs of the machine being braced near the bottom by the ordinary cross bar or tie rod. Just above this rod is exhibited the invention, being a "rockshaft B, beveled at the ends, and provided with V-shaped bearings *b*, extending to the center of motion of the rockshaft B, and supported in a V-shaped bearing seat *a*, in combination with a treadle movement." Elsewhere in the specification the bearings or supports in legs of the machine to receive the ends of the rockshaft B are referred to as "V-shaped bearings." The statement is also made that "The bar is prevented from having any undue lateral movement by the washers upon the ends of the tie rod *c*, which holds the lower part of the frame together." An alternate mode of construction of the bearings to support the rockshaft was thus described (italics not in original):

"The V-shaped seat of the bearings *a* may be formed of a separate piece of hard metal let into a groove in the frame, or otherwise applied to it, and the ends *b* may be formed also of a piece of hard metal, so that the wear of the parts in contact will be very slight, *and all rattling or loose jarring motions entirely prevented.*"

Although the first refusal to allow a patent was made on May 29, 1882, it was not until August 3 following that the attorneys for Cramer transmitted an amended application to the Patent Office. In the substituted specification the object to be attained is stated as in the previous specification. An addition to the combination was made, however, in the use of what were styled "mufflers," against which it was said the ends of the treadle bars were to bear. A patent was again refused, however, the examiner noting that "applicant's amended claims are met by the patent to J. E. Donovan, June 28, 1881, No. 243,529."

The drawing of the Donovan patent exhibits a sewing machine stand, containing a vertical double brace. One form of treadle bar constituting a part of the invention was represented as situated just below the vertical cross brace and as having a rounded edge, supported in V-shaped bearings, in the legs or sides of the frame. A shoulder was indicated on each end of the bar, and a substitute device was also shown called a button fastener, which was to be attached from the outside of the frame to meet the end of the bar. It was said in the specification that the treadle bar might be made of cast iron and cast on and with the treadle. It was further stated (italics not in original):

"The bearing supports are preferably made by *coring out the frame* in the manner shown in the drawings. It is obvious that other forms of supporting these bearings may be provided."

Several modified forms of ordinary knife edge bearings and inclined fastening and adjusted devices were also shown. In such modified forms

the treadle was represented as designed to oscillate on a rigid bar, in oblong grooves therein; lugs, having knife edge bearings underneath, being cast on each side of the treadle. Adjustable collars were shown, fastened to the shaft or bar, with inclined lugs or the side of the collars, projecting laterally over and resting against shoulders on the lugs upon each side of the treadle. The object of the invention was declared to be (italics not in original) "to secure a more substantial table frame to the driving mechanism and to provide adequate means for the employment of V-shaped treadle bearings, *so as to obviate the difficulty heretofore occasioned by lost motion, consisting in vertical and endwise play of the treadle bar or shaft.*" It was further observed by the applicant just preceding his statement of claims as follows (italics not in original):

"Frequent attempts have been made to use knife edge bearings for the treadle in sewing machines, but *it has been found to be difficult to prevent lateral lost motion and to adjust the parts so as to compensate for their wear and to prevent rattling of the treadle, which has been a serious objection in their employment.* My herein-described improvements have overcome all the serious objections hitherto attending their use."

Following the second rejection of his application, Cramer changed his attorneys as mentioned in the statement of facts. In the specification drafted by the new attorneys and which became the basis of the allowed patent, the asserted invention was limited to its use in sewing machines, eliminating the statement of its adaptability "in other machinery." Concerning the "mufflers," which in the previous specifications were simply referred to as bearing against the end of the treadle bars or as being on the ends of such bars, the following statement was made (italics not in original):

"Pieces of leather F, or other soft material, cover the top and end of each trunnion to serve as cushions *to keep the same close in its bearing, to prevent the noise which would result were the trunnions permitted to bounce, and thump endways, when the treadle is in motion.* The leather F is fitted to the curve of the upper side of the trunnion, which is an arc of a cylinder whose center of oscillation is the lower edge of the trunnion; the same leather also interposes between the end of the trunnion and the adjacent iron. *f* is a block serving as a mere backer to which the cushion F is attached. This block conforms to the back and top side of the cushion and fills the loophole in the brace above the trunnion. It also has tangs or projections *e*, resting in suitable recesses in the brace C, which are held between the brace and the web of the leg E, by which means the block and cushion are held in place. Below the bearings of the trunnions B, I provide cups, M, attached to the ends of brace C, to catch the oil that usually drips from such bearings."

It is not a strained deduction that the elaborate provision just referred to, respecting the mode of use of and the purpose to be subserved by the mufflers, was in part at least induced by the statement in the Willcox and

Donovan patents above quoted, concerning the difficulties which existed in connection with the use of knife edge or V-shaped bearings. Be this as it may, however, we are of opinion that the Patent Office, after twice refusing to allow the patent because of the prior patents referred to, was led to take favorable action, owing to the peculiar form of the described bearing, when situated in a vertical cross brace such as was shown in the drawing, with the described accessories, and that it was the purpose of the Patent Office to limit the patent to the particular device of treadle bar and bearing described and shown when employed in combination with a particular form of vertical cross brace. And this view is supported by the claim in question. It contains words of limitation. It is recited therein that the combination is to be "substantially as specified," that is, as described in the specifications and shown in the drawings. (*Westinghouse* v. *Boyden Power Brake Co.*, 170 U. S. 537, 558.) On referring to the specification we find it there expressly declared that the invention consisted "in the construction and combination of parts hereinafter fully described and claimed, reference being had to the accompanying drawing." Nowhere, either expressly or by reasonable inference, is it asserted that simply the best or a preferable construction of the whole or any part of the combination is what is described. On the contrary, starting with the well-known vertical cross brace, a usual accessory to sewing machines, a specific mode of construction of the treadle bar and of the bearings or supports in the vertical cross brace, is set forth, and the specification is concluded with the following declaration (italics mine):

"*By this construction* my treadle bearings are rigidly fixed and in no way liable to get out of line or to require adjustment; the usual noise is prevented, and overflowing of oil is caught before it can do damage."

To prevent a broadening of the scope of the invention beyond its fair import, in the light of the circumstances surrounding the issuance of the patent, the words of limitation contained in the claim must be given due effect, and, giving them such effect, the statement in the first claim of the elements entering into the combination must be construed to refer to elements in combination having substantially the form and constructed substantially as described in the specification and shown in the drawing.

Having determined the proper construction of the claim of the Cramer patent, which is relied upon, it remains only to consider whether, as correctly construed, infringement resulted from the employment by the Singer Company of the device covered by the Diehl patent. We find no difficulty in reaching a conclusion on this branch of the case. The treadle supports devised by Diehl, though they serve the same purpose as the device described and shown in the Cramer patent, are substantially different in construction. Irrespective of the question whether the treadle in the Diehl device is hung in the vertical cross brace proper, or in an addition thereto properly to be regarded as the lower cross rod or cross tie of the machine, it is manifest that

the bearing is essentially different in construction from that of Cramer, and is not adapted to receive an oscillating bar; while the treadle is not supplied with long projections fitted to oscillate in the vertical cross bar on bearings therein, but is constructed to turn on point center screws which fit tightly in circular openings in projections from the vertical cross bar. There is no substantial identity in the character of the two devices, unless, by substantial identity, is meant every combination which produces the same effect. The differences between the Diehl device and the Cramer construction are substantial and not merely colorable.

The trial court should have granted the motion to direct a verdict for the defendant. In affirming the action of the trial court in overruling the motion, the Circuit Court of Appeals erred, and its judgment must, therefore, be reversed. The judgment of the Circuit Court is also reversed and the cause is remanded to that court with directions to grant a new trial, and for further proceedings not inconsistent with this opinion.

Reversed and remanded.

Mr. Justice McKenna took no part in the decision of this cause.

True copy.

Test:

Clerk Supreme Court, U. S.